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Thr Met Arg Thr Asp Ala Leu Pro Met Glu Ala Leu Glu His Ala Leu
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Thr Thr Ala Gly Arg Ile His Gly Asn Gln Leu Ile His His Ser Asp
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Arg Gly Ser Gln Tyr Val Ser Leu Lys Tyr Ser Thr Ala Leu Ala Glu
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Ser Gly Ile Arg Pro Ser Val Gly Thr Val Gly Asp Ser Tyr Asp Asn
                                    90
Ala Leu Ala Glu Thr Val Asn Gly Leu Tyr Lys Ala Glu Leu Ile His
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ategetgege tacgeaceaa egtggtegge aagatgttgg teageggega geecegenaa
tgattcatat ctccgatatc agcacgacag gggcgtcatt ccgctctgca catcggcttg
240
gaagtcagcg gtgcgcccgc acgcctgcga tttcgggtga agacgcgcga ctaccattca
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Arg Gly Arg Gln Asp Val Gly Gln Arg Arg Ala Pro Xaa Met Ile His
                                                45
        35
                            40
Ile Ser Asp Ile Ser Thr Thr Gly Ala Ser Phe Arg Ser Ala His Arg
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Leu Gly Ser Gln Arg Cys Ala Arg Thr Pro Ala Ile Ser Gly Glu Asp
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Glu Ala Arg Arg Phe Ala Gln His Leu Ser Ile Arg Arg Gly Ile
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cgcctctccc ccccagaagc tcccgacagg cccaccatct ccacggcctc cgagacctca
180
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300
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Ser Lys Glu Gln Gln Ile Gln Arg Asp Asp Leu Gly Ala Ser Pro Gln
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Ser Ser Ser Gln Pro Asp His Gly Arg Leu Ser Pro Pro Glu Ala Pro
                                                45
      35
                            40
Asp Arg Pro Thr Ile Ser Thr Ala Ser Glu Thr Ser Val Tyr Val Thr
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                                            60
Trp Ile Pro Arg Gly Asn Gly Gly Phe Pro Ile Gln Ser Phe Arg Val
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Glu Tyr Lys Lys Leu Lys Lys Val Gly Asp Trp Ile Leu Ala Thr Ser
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Ala Ile Pro Pro Arg
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25
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Ser His Thr Gln Glu Pro Ser Gln Gln Pro Pro Pro Trp Leu Ser Arg
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Tyr Thr Arg Val Thr Ala Glu Thr Arg Arg Ser Lys Pro Gly Asp Thr
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Ser His Gln Gly Asp Cys Val Gly Glu Arg Ala Ser Arg Pro Leu Gly
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Ser Ser Val Lys Asp Met Leu Ala Phe Leu Phe Leu Pro Asp Ile Pro
                            40
                                               45
Glu Ser Arg Glu Leu Ser Cys Asn Ala Ser Asn Pro Leu Gly Leu Asn
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                        55
Ser Phe Pro Arg Glu Thr Arg Ser Thr Val Arg Ser Gln Gly Pro Pro
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Thr His Val Gln Gly Lys Glu Gly Arg
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accacgctag 540	gtctgaccaa	gtttgaggct	aaaattgggc	aaggaaatga	accaagcatc
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                                25
Lys Ser Glu Glu Leu Gln Arg Leu Thr Ala Ser Glu Pro Leu Thr Leu
Glu Gln Glu Tyr Ala Met Gln Cys Ser Trp Gln Glu Asp Ala Asp Lys
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Cys Thr Phe Ile Val Leu Asp Ala Glu Lys Trp Gln Ala Gln Pro Gly
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65
Ala Thr Glu Glu Ser Cys Met Val Gly Asp Val Asn Leu Phe Leu Thr
                                    90
               85
Asp Leu Glu Asp Pro Thr Leu Gly Glu Ile Glu Val Met Ile Ala Glu
                                105
                                                    110
            100
Pro Ser Cys Arg Gly Lys Gly Leu Gly Thr Glu Ala Val Leu Ala Met
                                                125
       115
                           120
Leu Ser Tyr Gly Val Thr Thr Leu Gly Leu Thr Lys Phe Glu Ala Lys
                        135
                                            140
Ile Gly Gln Gly Asn Glu Pro Ser Ile Arg Met Phe Gln Lys Leu His
                                        155
                   150
Phe Glu Gln Val Ala Thr Ser Ser Val Phe Gln Glu Val Thr Leu Arg
                                                       175
                                   170
               165
Leu Thr Val Ser Glu Ser Glu His Gln Trp Leu Leu Glu Gln Thr Ser
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His Val Glu Glu Lys Pro Tyr Arg Asp Gly Ser Ala Glu Pro Cys
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180
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ctgtgttggg ctcgcaccac cagctggaga gccctagctg cagcagcttt ggatcaacat
360
ccagegaceg teaagttege tegggtagag teageegeeg gtaatgegee ggegatgetg
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cccggcatct ccgcgatcgt catgtcgac
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Lys Arg Pro Ala Ser Val Ile Leu Pro Leu Leu Leu Ser Asp Ser Pro
       35
                            40
                                                45
Val Ile Ala Trp Trp Pro Phe Ser Gly Pro Asp Asn Leu Ala Ser Asp
                        55
   50
Pro Ile Gly Ala Leu Ala Asp Arg Ile Thr Asp Ser Ala Ala Asp
                                        75
                    70
Lys Asp Pro Cys Lys Ala Leu Ile Arg Arg Ala Ala His Leu Thr Glu
                                    90
                                                        95
                85
Gly Asp Ser Asp Leu Cys Trp Ala Arg Thr Thr Ser Trp Arg Ala Leu
                                                    110
            100
                                105
Ala Ala Ala Leu Asp Gln His Pro Ala Thr Val Lys Phe Ala Arg
                            120
                                                125
       115
Val Glu Ser Ala Ala Gly Asn Ala Pro Ala Met Leu Leu Ala Ala Trp
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                       135
   130
Leu Gly Leu Arg Leu Gly Val Pro Val Glu Arg Val Thr Thr Asp Ala
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                   150
Pro Gly Ile Ser Ala Ile Val Met Ser
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cagccgaact acgacctgac gtatgacgac gtcttcatgg caccaaaccg ttcctcggtg
180
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gggtcccgca tgaacgtcga cctcacgtca acagacgggc taggcactcc tctgcccctc
gtagtggcca atatgaccgc aatttccgga cgtcgcatgg cagagaccat cgccaggcgc
300
ggaggcattg ctgttctgcc ccaagatatc ccggcggatt tcgtcgcccg gtccattcgg
360
cqcqtcaaaq atgcgcatac tcgattcgac accccagtca ccgtcaaccc gacaacgact
gtcggtgagg ccatgaactt gctcaacaag cgc
453
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<211> 134
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<213> Homo sapiens
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Tyr Val Arg Phe Leu Asn Glu Gln Pro Asn Tyr Asp Leu Thr Tyr Asp
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           20
                                25
Asp Val Phe Met Ala Pro Asn Arg Ser Ser Val Gly Ser Arg Met Asn
                            40
       35
Val Asp Leu Thr Ser Thr Asp Gly Leu Gly Thr Pro Leu Pro Leu Val
                        55
                                            60
    50
Val Ala Asn Met Thr Ala Ile Ser Gly Arg Arg Met Ala Glu Thr Ile
                    70
                                        75
Ala Arg Arg Gly Gly Ile Ala Val Leu Pro Gln Asp Ile Pro Ala Asp
                                    90
               85
Phe Val Ala Arg Ser Ile Arg Arg Val Lys Asp Ala His Thr Arg Phe
           100
                                105
                                                    110
Asp Thr Pro Val Thr Val Asn Pro Thr Thr Thr Val Gly Glu Ala Met
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Asn Leu Leu Asn Lys Arg
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acagageetg caatacteeg tgtetggaat acgttatttg etgeacacet eccagaggaa
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300
caaatattcg gcttccataa caagttacat tgctcacatc ttaaaatatt cattacacgt
360
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gaaaccaccg catggtaccg acatccttct ggaatgtccc gcacagaggc tgatatatgt
420
geacagitet cacigitets esigeecase eceteacaet sgaeseceae eteacaetet
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tetgecaagg gagaetttgg tteteceett ecetgtgetg getgtgeggg ceacagteet
ctgcacgcca gcagcatgac gcgt
564
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<211> 106
<212> PRT
<213> Homo sapiens
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Cys Thr Gln Ile Phe Gly Phe His Asn Lys Leu His Cys Ser His Leu
                                                    30
           20
                                25
Lys Ile Phe Ile Thr Arg Glu Thr Thr Ala Trp Tyr Arg His Pro Ser
                            40
Gly Met Ser Arg Thr Glu Ala Asp Ile Cys Ala Gln Phe Ser Leu Phe
                        55
                                            60
   50
Cys Val Pro Ser Pro Ser His Trp Thr Pro Thr Ser His Ser Ser Ala
                    70
                                        75
65
Lys Gly Asp Phe Gly Ser Pro Leu Pro Cys Ala Gly Cys Ala Gly His
                                    90
                85
Ser Pro Leu His Ala Ser Ser Met Thr Arg
<210> 2543
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<212> DNA
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180
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tgtctgggtc ccccagctgg gctagagagg gcagtgatca tctgtccact ggacaggaag
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387
<210> 2544
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70
                                        75
Val Ile Ile Val Gly Ser Val Val Ser Ala Ala Tyr Ala Leu Leu Ser
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                                  90
Asp Leu Lys Leu Val Lys Ser Ala Leu Thr Lys Pro Phe Lys Thr Gly
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cttcatttga actgaagacc acctgtaagc acgcagctca aatgttctca cctagaaatt
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agggacaccc agccctgcta cgttgcgtgt cattatgtgg tgctgtgcta tccatagaga
360
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           20
                               25
Arg Pro Ser Tyr Cys Gly Asp Glu Ile Phe Val Leu Ser Cys Ser Leu
                ,
                           40
Ile Ser Leu Cys Arg Ile Phe Phe Ile Ser Ser Phe Ser Met Asp Ser
                        55
Thr Ala Pro His Asn Asp Thr Gln Arg Ser Arg Ala Gly Cys Pro Ser
                   70
                                        75
Leu Lys Leu Ala Arg Pro Phe Ser Leu Thr Val Lys Ser Thr Phe Gln
Thr Gln Leu Glu Phe Leu Gly Glu Asn Ile
           100
                               105
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<212> DNA
<213> Homo sapiens
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ggttctggtg aatttactat tgagacgatc gataaagcga ctcgtggtac acgcattact
ttgcatctga aagcagatga aaaagatttc gcagacaact tccgtctacg ttcattagta
420
acaaaatatt ctgat
435
<210> 2550
<211> 145
<212> PRT
<213> Homo sapiens
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1
                5
                                    10
Asn Thr Val Val Ile Asp Asp Asn Gly Val Gly Met Ser Arg Glu Glu
                                25
                                                    30
Ala Ile Thr Asn Leu Gly Thr Ile Ala Lys Ser Gly Thr Ser Ser Phe
       35
                                                45
                            40
Leu Glu Gln Leu Ser Gly Asp Gln Lys Lys Asp Ser Gln Leu Ile Gly
                                            60
Gln Phe Gly Val Gly Phe Tyr Ser Ala Phe Ile Val Ala Asp Lys Val
                    70
                                        75
Thr Val Glu Thr Arg Arg Ala Gly Ala Thr Glu Asn Glu Ala Val Arg
                                    90
               85
Trp Val Ser Asp Gly Ser Gly Glu Phe Thr Ile Glu Thr Ile Asp Lys
                               105
           100
Ala Thr Arg Gly Thr Arg Ile Thr Leu His Leu Lys Ala Asp Glu Lys
                                               125
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Asp Phe Ala Asp Asn Phe Arg Leu Arg Ser Leu Val Thr Lys Tyr Ser
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Asp
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120
ctecceage aatetetgte tacaceteet geggegeett geeeteetee gacecettte
cagccannaa gtccccccac cccttcagag aagcagcctc aaattccaga agtggaggct
240
ccagcetece egegaggtae cageeceaea gtettetggg agecattgtg gecagggaeg
300
gcctctggac tgccaggctg ggttggggac cagggaacat cggtctactc aggtgtgagg
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403
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Thr Leu Asn Arg Gly Leu His Phe Trp Gly Arg Leu Val Arg Ser Pro
                                25
                                                    30
Thr Arg Pro Arg Leu Arg Ser Met Leu Pro Gln Gln Ser Leu Ser Thr
                            40
                                                45
        35
Pro Pro Ala Ala Pro Cys Pro Pro Pro Thr Pro Phe Gln Pro Xaa Ser
                        55
                                            60
Pro Pro Thr Pro Ser Glu Lys Gln Pro Gln Ile Pro Glu Val Glu Ala
                                        75
                    70
Pro Ala Ser Pro Arg Gly Thr Ser Pro Thr Val Phe Trp Glu Pro Leu
                85
                                   90
Trp Pro Gly Thr Ala Ser Gly Leu Pro Gly Trp Val Gly Asp Gln Gly
                               105
           100
Thr Ser Val Tyr Ser Gly Val Arg Gly Gln Val Trp Pro Ala Pro Lys
                            120
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Leu Ala Pro Ser Trp Thr
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gagagataca gcatgggcca aggagcactg ggagccagca gcagctggaa gaggcaggag
quatectice tagacegeae aggatgetae tgggtgagee tgetgteetg gaaaaggegt
180
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```
gaagtotgoo tgagtgggca ggggottotg cgcagcacco agcaaggcca aggtggaagg
gaccotcotg goccotgtoc tggotocaco otcagotget ggcaggtggg teaccaggeo
tetgeccaaa gaaacteetg caggeagete tggacceet gtettacaca cetteteact
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Gly Cys Tyr Trp Val Ser Leu Leu Ser Trp Lys Arg Arg Glu Val Cys
       35
                            40
Leu Ser Gly Gln Gly Leu Leu Arg Ser Thr Gln Gln Gly Gly Gly
                        55
                                            60
Arg Asp Pro Pro Gly Pro Cys Pro Gly Ser Thr Leu Ser Cys Trp Gln
                                        75
                    70
65
Val Gly His Gln Ala Ser Ala Gln Arg Asn Ser Cys Arg Gln Leu Trp
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Thr Pro Cys Leu Thr His Leu Leu Thr Glu Pro Ala Ser Ile Pro
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gataacgcga ataatggtag tgtcgttcta gtgctcacag acctggtcac ccaaatagaa
ggatttatat cotcocatat cotcattttt gtgctcgttg gcctcggcat tgtctttacc
gttgccactc gaggtgtaca gttccgcctc ttcgggcaca tgtggcacct catgctcgat
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368
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Tyr Ala Lys Gly Gly Lys Ile Gly Leu Phe Gly Gly Ala Gly Val Gly

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70
Lys Thr Val Leu Ile Gln Glu Leu Ile Arg Asn Ile Ala Thr Glu His
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Gly Gly Tyr Ser Val Phe Ala Gly Val Gly Glu Arg Thr Arg Glu Gly
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                                                    110
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Asn Asp Leu Trp Val Glu Met Lys Glu Ser Gly Val Ile Ala Lys Thr
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Ala Leu Val Phe Gly Gln Met Asn
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ttgcatctcg aagttatgaa tttgcgccag caactgagag ctgtaaaaga ggaagaagac
aaggcacaag atgaggtgca aaggttgact gccactctga agattgcctc gcagacaaag
aagaatgcag ccattattga agaggaactg aagaccacaa aacgtaaaat gaaccttaaa
atteaagage ttetagagat gaceteattt ceaagttggt tgaagaaaat aagaacetge
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Glu His Ser Lys Asp Leu Lys Leu Leu His Leu Glu Val Met Asn Leu
                            40
Arg Gln Gln Leu Arg Ala Val Lys Glu Glu Glu Asp Lys Ala Gln Asp
                        55
                                            60
Glu Val Gln Arg Leu Thr Ala Thr Leu Lys Ile Ala Ser Gln Thr Lys
                   70
                                        75
Lys Asn Ala Ala Ile Ile Glu Glu Glu Leu Lys Thr Thr Lys Arg Lys
Met Asn Leu Lys Ile Gln Glu Leu Leu Glu Met Thr Ser Phe Pro Ser
          100
                                105
Trp Leu Lys Lys Ile Arg Thr Cys Arg Ile Ser Phe Asn Arg Asn Met
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Lys
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aaaqctgtat tggattgtga ggcaatgaaa acaaatgaat tcccttctcc atgtttggac
180
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aaatcactgc agatcaccta ttcattgttt cgacgtaaga cacacctggg aacccaggat
ggaaaaggtg aacctgcgat ttttaaccta agcatcacag aagcccatga atcaggcccc
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                                25
Ile Phe Ser Ser Val Thr Cys Arg Lys Ala Val Leu Asp Cys Glu Ala
Met Lys Thr Asn Glu Phe Pro Ser Pro Cys Leu Asp Ser Lys Thr Lys
                       55
Val Val Met Lys Gly Gln Asn Val Ser Met Phe Cys Ser His Lys Asn
                                       75
                   70
Lys Ser Leu Gln Ile Thr Tyr Ser Leu Phe Arg Arg Lys Thr His Leu
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               85
Gly Thr Gln Asp Gly Lys Gly Glu Pro Ala Ile Phe Asn Leu Ser Ile
           100
                               105
Thr Glu Ala His Glu Ser Gly Pro Tyr Lys Cys Lys Ala Gln Val Thr
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Ser Cys Ser Lys Tyr Ser Arg Asp Phe Ser Phe Thr Ile Val Asp
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                       135
<210> 2563
<211> 267
<212> DNA
<213> Homo sapiens
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720					
780				agccttgtgc	
840				gccctcgcta	
900				gttatggggg	
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<212> PRT

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Thr Gly Ser Ser Gly Ala Leu Ser Pro Gly Gly Pro Gln Ala Gln Ile 35 40 45

Ala Pro Arg Pro Ala Ser Arg His Arg Asn Trp Cys Ala Tyr Val Val
50 55 60

Thr Arg Thr Val Ser Cys Val Leu Glu Asp Gly Val Glu Thr Tyr Val 65 70 75 80

Lys Tyr Gln Pro Cys Ala Trp Gly Gln Pro Gln Cys Pro Gln Ser Ile 85 90 95

Met Tyr Arg Arg Phe Leu Arg Pro Arg Tyr Arg Val Ala Tyr Lys Thr
100 105 110

Val Thr Asp Met Glu Trp Arg Cys Cys Gln Gly Tyr Gly Gly Asp Asp 115 120 125

Cys Ala Glu Ser Pro Ala Pro Ala Leu Gly Pro Ala Ser Ser Thr Pro 130 135 140

Arg Pro Leu Ala Arg Pro Ala Arg Pro Asn Leu Ser Gly Ser Ser Ala 145 150 155 160

Gly Ser Pro Leu Ser Gly Leu Gly Gly Glu Gly Pro Gly Glu Ser Glu
165 170 175

Lys Val Gln Gln Leu Glu Glu Gln Val Gln Ser Leu Thr Lys Glu Leu 180 185 190

Gln Gly Leu Arg Gly Val Leu Gln Gly Leu Ser Gly Arg Leu Ala Glu 195 200 205 Asp Val Gln Arg Ala Val Glu Thr Ala Phe Asn Gly Arg Gln Gln Pro

210 215 220

Ala Asp Ala Ala Ala Arg Pro Gly Val His Glu Thr Leu Asn Glu Ile
225 230 235 240

Gln His Gln Leu Gln Leu Leu Asp Thr Arg Val Ser Thr His Asp Gln
245 250 255

Glu Leu Gly His Leu Asn Asn His His Gly Gly Ser Ser Ser Gly
260 265 270

Gly Ser Arg Ala Pro Ala Pro Ala Ser Ala Pro Pro Gly Pro Ser Glu 275 280 285

Glu Leu Leu Arg Gln Leu Glu Gln Arg Leu Gln Glu Ser Cys Ser Val
290 295 300

Cys Leu Ala Gly Leu Asp Gly Phe Arg Arg Gln Gln Gln Glu Asp Arg 305 310 315 320

Glu Arg Leu Arg Ala Met Glu Lys Leu Leu Ala Ser Val Glu Glu Arg 325 330 335

Gln Arg His Leu Ala Gly Leu Ala Val Gly Arg Arg Pro Pro Gln Glu 340 345 350

Cys Cys Ser Pro Glu Leu Gly Arg Arg Leu Ala Glu Leu Glu Arg Arg

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Leu	Asp		Val	Ala	Glv	Ser		Thr	Val	Leu	Ser		Arq	Arq	Gly
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Thr	Glu	Leu	Gly	Gly	Ala	Ala	Gly	Gln	Gly	Gly	His	Pro	Pro	Gly	Tyr
385			-		390					395					400
Thr	Ser	Leu	Ala	Ser	Arg	Leu	Ser	Arg	Leu	Glu	Asp	Arg	Phe	Asn	Ser
				405					410					415	
Thr	Leu	Gly	Pro	Ser	Glu	Glu	Gln	Glu	Glu	Ser	Trp	Pro	Gly	Ala	Pro
			420					425					430		
Gly	Gly	Leu	Ser	His	Trp	Leu	Pro	Ala	Ala	Arg	Gly	Arg	Leu	Glu	Gln
		435					440					445			
Leu	Gly	Gly	Leu	Leu	Ala	Asn	Val	Ser	Gly	Glu	Leu	Gly	Gly	Arg	Leu
	450					455					460				
_	Leu	Leu	Glu	Glu	Gln	Val	Ala	Gly	Ala	Met	Gln	Ala	Cys	Gly	Gln
465					470					475					480
Leu	Cys	Ser	Gly		Pro	Gly	Glu	Gln		Ser	Gln	Val	Ser		Ile
				485					490	_				495	
Leu	Ser	Ala		Glu	Arg	Arg	Val		Asp	Ser	Glu	GIY		Leu	Arg
_			500		_		<b>~</b> 1	505				~1	510	• • •	
Leu	Val	_	Ser	GIY	Leu	His		val	GIU	Ala	Ala		GIU	Ala	Arg
~1-		515	_	<b>~</b> 1	<b></b> 1	•	520	<b>01</b>	11-1	17-3	<b>~1</b>	525	•	<b>~</b> 1	<b>3</b>
GIn		Thr	Leu	GLU	GIY	Leu	GIN	GIU	vaı	vai	_	Arg	reu	GIN	Asp
B	530	n	n 1 -	~1-		535 Glu	The	n ) -	21-	C1	540	The	T 011	7	t ou
545	vaı	АБР	AId	GIII	550	GIU	1111	AIA	Ala	555	FIIC	1111	Бец	ALG	560
	T. 211	Thr	Δla	λla		Leu	Glv	Gln	1.011		Glv	Leu	Len	Gln	
A311	пси	1111	AIG	565	Ar 9	DCu	01,	<b>U111</b>	570		<b>-</b>		200	575	
His	Glv	Asp	Glu		Cvs	Gly	Ala	Cvs	_	Glv	Val	Gln	Glu	-	Leu
	~-,		580	,	-1-	1		585	1	2			590		
Gly	Arg	Leu	Arg	Asp	Gly	Val	Glu	Arg	Cys	Ser	Cys	Pro	Leu	Leu	Pro
•	•	595	Ū	-	-		600	_	_		_	605			
Pro	Arg	Gly	Pro	Gly	Ala	Gly	Pro	Gly	Val	Gly	Gly	Pro	Ser	Arg	Gly
	610					615					620				
Pro	Leu	Asp	Gly	Phe	Ser	Val	Phe	Gly	Gly	Ser	Ser	Gly	Ser	Ala	Leu
625					630					635					640
Gln	Ala	Leu	Gln	Gly	Glu	Leu	Ser	Glu	Val	Ile	Leu	Ser	Phe	Ser	Ser
				645		_		_	650					655	_
Leu	Asn	Asp		Leu	Asn	Glu	Leu		Thr	Thr	Val	Glu		Gln	Gly
	_	_	660	_	_			665	_				670	_	
Ala	Asp		Ala	Asp	Leu	Gly		Thr	Lys	Asp	Arg		lle	ser	Glu
-1.	•	675	•	<b>~</b> 3 -	<b>01.</b>	a1	680	m 1	c1	***	21.	685 Tha	~1	C	<b>~1</b>
lle		Arg	Leu	GIN	GIn	Glu	Ala	Thr	GIU	HIS	700	Inr	GIU	ser	GIU
C1	690	Dho	2 ~~	C1	Lau	695 Glu	Gl.	Clv	Cln	בות		Λla	Gly	Gla	Cve
705	ALG	PHE	ALG	GIY	710	Giu	GIU	GLY	GIII	715	GIII	nra	GLY	GIII	720
	car	LAU	GI.	Glv		Leu	Glaz	Ara	Len		Glv	Va 1	Cve	Glu	
210	261	Leu	GIU	725	rra	LCu	GLY	7.9	730	014	Gry	vui	cys	735	AT 9
T.eu	Asp	Thr	Va1		Glv	Gly	Leu	G) n		Leu	Ara	Glu	Glv		Ser
J.C.U	<sub>D</sub>		740	-144	52 y	1		745	~- <i>y</i>	~~~	3		750		
Arg	His	Val		Glv	Leu	Trp	Ala		Leu	Ara	Glu	Thr		Thr	Thr
9		755		,			760			. ,		765			
Ser	Gln		Gln	Ala	Ala	Leu		Glu	Lys	Leu	Val	Gly	Gly	Gln	Ala
	770					775			-		780	-	-		
Glv	Leu	Gly	Arg	Arg	Leu	Gly	Ala	Leu	Asn	Ser	Ser	Leu	Gln	Leu	Leu
,															

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790
785
Glu Asp Arg Leu His Gln Leu Ser Leu Lys Asp Leu Thr Gly Pro Ala
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                              810
Gly Glu Ala Gly Pro Pro Gly Pro Pro Gly Leu Gln Gly Pro Pro Gly
                  825
         820
Pro Ala Gly Pro Pro Gly Ser Pro Gly Lys Asp Gly Gln Glu Gly Pro
                     840
                                          845
Ile Gly Pro Pro Gly Pro Gln Gly Glu Gln Gly Val Glu Gly Ala Pro
            855
                                      860
   850
Ala Ala Pro Val Pro Gln Val Ala Phe Ser Ala Ala Leu Ser Leu Pro
                          875
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Arg Ser Glu Pro Gly Thr Val Pro Phe Asp Arg Val Leu Leu Asn Asp
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Gln Gly Leu 385 Lys Ser Leu Arg Tyr 465 Lys	Asn Arg 370 Glu Glu Asp Leu Glu 450 Glu Ser Arg	Met 355 Thr Glu Asp Arg Glu 435 Lys Asp Ser	340 Asn Pro Gln Gly Ser 420 Lys Met Gln Asp Glu	Leu Ile Asp Leu Cys 405 Glu Ala Ala Ser 485 Lys	Arg Ser 190 His Glu Ile Met Pro 470 His	Gln Asn 375 Pro Glu Val Ala Glu 455 Arg Val Glu	His 360 Tyr Arg Arg Phe Leu 440 Ala Gln Lys Ser	345 Val Ser Ser Asp 425 Glu Gly Leu Lys 505	Arg Asp Asp 410 Met Thr Arg Pro 490 Cys	Pro Met Val 395 Asp Thr Glu Arg Gly 475 Tyr	Glu Leu 380 Phe Thr Lys Arg Asp 460 Glu Tyr	Glu 365 Asn Ala Thr Gly Ala 445 Asn Asp Gly	350 Asp Leu Ser Ser Asn 430 Lys Met Arg Lys Gly 510	Phe Met Cys Val 415 Leu Ala Arg Lys Asp 495 Cys	Pro Arg Ala 400 Asn Thr Met Ser Pro 480 Pro Asp
Gln Gly Leu 385 Lys Ser Leu Arg Tyr 465 Lys	Asn Arg 370 Glu Glu Asp Leu Glu 450 Glu Ser Arg	Met 355 Thr Glu Asp Arg Glu 435 Lys Asp Ser	340 Asn Pro Gln Gly Ser 420 Lys Met Gln Asp Glu 500	Leu Ile Asp Leu Cys 405 Glu Ala Ala Ser 485 Lys	Arg Ser 190 His Glu Ile Met Pro 470 His	Gln Asn 375 Pro Glu Val Ala Glu 455 Arg Val Glu	His 360 Tyr Arg Arg Phe Leu 440 Ala Gln Lys Ser	345 Val Ser Ser Asp 425 Glu Gly Leu Lys 505	Arg Asp Asp 410 Met Thr Arg Pro 490 Cys	Pro Met Val 395 Asp Thr Glu Arg Gly 475 Tyr	Glu Leu 380 Phe Thr Lys Arg Asp 460 Glu Tyr	Glu 365 Asn Ala Thr Gly Ala 445 Asn Asp Gly	350 Asp Leu Ser Ser Asn 430 Lys Met Arg Lys Gly 510	Phe Met Cys Val 415 Leu Ala Arg Lys Asp 495 Cys	Pro Arg Ala 400 Asn Thr Met Ser Pro 480 Pro Asp
Gln Gly Leu 385 Lys Ser Leu Arg Tyr 465 Lys Ser Gly	Asn Arg 370 Glu Glu Asp Leu Glu 450 Glu Ser Arg	Met 355 Thr Glu Asp Glu 435 Lys Asp Ser Thr	340 Asn Pro Gln Gly Ser 420 Lys Met Gln Asp Glu 500	Leu Ile Asp Leu Cys 405 Glu Ala Ala Ser 485 Lys	Arg Arg Ser 190 His Glu Ile Met Pro 470 His Lys	Gln Asn 375 Pro Glu Val Ala Glu 455 Arg Val Glu Gly	His 360 Tyr Arg Arg Phe Leu 440 Ala Gln Lys Ser Leu 520	345 Val Ser Ser Asp 425 Glu Gly Leu Lys 505 Tyr	Arg Asp Arg Asp 410 Met Thr Arg Pro 490 Cys	Pro Met Val 395 Asp Thr Glu Arg Gly 475 Tyr	Glu Leu 380 Phe Thr Lys Arg Asp 460 Glu Tyr Thr His	Glu 365 Asn Ala Thr Gly Ala 445 Asn Asp Gly Pro	350 Asp Leu Ser Ser Asn 430 Lys Met Arg Lys Gly 510 Ser	Phe Met Cys Val 415 Leu Ala Arg Lys Asp 495 Cys	Pro Arg Ala 400 Asn Thr Met Ser Pro 480 Pro Asp Ser
Gln Gly Leu 385 Lys Ser Leu Arg Tyr 465 Lys Ser Gly	Asn Arg 370 Glu Glu Asp Leu Glu 450 Glu Ser Arg Thr Cys 530	Met 355 Thr Glu Asp Arg Glu 435 Lys Asp Ser Thr Gly 515 Pro	340 Asn Pro Gln Gly Ser 420 Lys Met Gln Asp Glu 500 His	Leu Ile Asp Leu Cys 405 Glu Ala Ala Ser 485 Lys Val	Arg Ser 390 His Glu Ile Met Pro 470 His Lys Thr Asp	Gln Asn 375 Pro Glu Val Ala Glu 455 Arg Val Glu Gly Arg 535	His 360 Tyr Arg Arg Phe Leu 440 Ala Gln Lys Ser Leu 520 Val	345 Val Ser Ser Asp 425 Glu Gly Leu Lys 505 Tyr	Arg Asp Arg Asp 410 Met Thr Arg Pro 490 Cys Pro	Pro Met Val 395 Asp Thr Glu Arg Gly 475 Tyr Pro His Glu	Glu Leu 380 Phe Thr Lys Arg Asp 460 Glu Tyr Thr His	Glu 365 Asn Ala Thr Gly Ala 445 Asn Asp Gly Pro Arg 525 Leu	350 Asp Leu Ser Ser Asn 430 Lys Met Arg Lys Gly 510 Ser Ala	Phe Met Cys Val 415 Leu Ala Arg Lys Asp 495 Cys Leu	Pro Arg Ala 400 Asn Thr Met Ser Pro Asp Ser His

545					550					555	_		_	_	560
	Asn			565					570					575	
Ala	Ala	Ala	Glu 580	Lys	Leu	Ala	Lys	Ala 585	Gln	Glu	ГÀЗ	His	Gln 590	Ser	Cys
Asp	Val	Ser 595	Lys	Ser	Ser	Gln	Ala 600	Ser	Asp	Arg	Val	Leu 605	Arg	Pro	Met
Cys	Phe		Lys	Gln	Leu			Pro	Gln	Tyr	Gly 620		Arg	Asn	Asn
17. 1	610 Pro	mb	mh	mb	D=4	615	co.~	λαπ	Lou	λlο		Glu	Len	Glu	Lve
625					630					635					640
	Ser			645					650					655	
Gly	Lys	Arg	Ala 660	Ile	Ala	Pro	Lys	Val 665	Gln	Thr	Arg	Asp	Ile 670	Ser	Pro
Lys	Gly	Tyr 675	Asp	Asp	Ala	Lys	Arg 680	Tyr	Cys	Lys	Asp	Pro 685	Ser	Pro	Ser
Ser	Ser 690		Thr	Ser	Ser	Tyr 695		Pro	Ser	Ser	Ser 700	Ser	Asn	Leu	Ser
	Gly	Gly	Gly	Ser			Ser	Ser	Thr	Cys 715		Lys	Ser	ser	Phe 720
705	Tyr	m\	114 -	7	710	C1	71-	<b>71</b> -	uic		a15	λla	Thr	Δla	
				725					730					735	
	Asn		740					745					750		
Lys	Pro	Gln 755	Asp	Leu	Суѕ	Ala	Thr 760	Arg	Asn	Pro	Asp	Met 765	Glu	Val	Asp
Glu	Asn 770	Gly	Thr	Leu	Asp	Leu 775	Ser	Met	Asn	Lys	Gln 780	Arg	Pro	Arg	Asp
Ser 785	Cys	Cys	Pro	Ile	Leu 790	Thr	Pro	Leu	Glu	Pro 795	Met	Ser	Pro	Gln	Gln 800
	Ala	Val	Met	Asn		Ara	Cvs	Phe	Gln		Glv	Glu	Gly	Asp	Cys
	Asp			805					810					815	
			820				-	825					830		
	Asp	835					840					845			
	Ala 850					855					860				
Pro	Lys	Pro	Lys	Tyr	Pro	Gln	Cys	Lys	Glu		Lys	Lys	Asp	Leu	
865					870		_		_	875		_			880
	Leu			885					890					895	
	Thr		900					905					910		
Ser	Gly	His	Ile	Thr	Gly	Asn	Tyr 920	Ala	Ser	His	Arg	Ser 925	Leu	Ser	Gly
Cys	Pro		Ala	Lys	Lys	Ser 935		Ile	Arg	Ile	Ala 940	Gln	Ser	Lys	Glu
Acn	Lys	Glu	Asn	Gln	Glo		Ile	Ara	Cvs	Pro		Pro	Gly	Cys	Asp
945	-		25	~	950			3	-1-	955			- 4	•	960
Gly	Gln	Gly	His	Ile 965		Gly	Lys	Tyr	Ala 970	Ser	His	Arg	Ser	Ala 975	Ser
Gly	Cys	Pro	Leu		Ala	Lys	Arg	Gln		Asp	Gly	Tyr	Leu		Gly

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985
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Ser Gln Phe Ser Trp Lys Ser Val Lys Thr Glu Gly Met Ser Cys Pro
                          1000
                                              1005
       995
Thr Pro Gly Cys Asp Gly Ser Gly His Val Ser Gly Ser Phe Leu Thr
                      1015
                                          1020
His Arg Ser Leu Ser Gly Cys Pro Arg Ala Thr Ser Ala Met Lys Lys
                                      1035
           1030
Ala Lys Leu Ser Gly Glu Gln Met Leu Thr Ile Lys Gln Arg Ala Ser
                                   1050
               1045
Asn Gly Ile Glu Asn Asp Glu Glu Ile Lys Gln Leu Asp Glu Glu Ile
                                                  1070
                               1065
           1060
Lys Glu Leu Asn Glu Ser Asn Ser Gln Met Glu Ala Asp Met Ile Lys
                          1080
Leu Arg Thr Gln Ile Thr Thr Met Glu Ser Asn Leu Lys Thr Ile Glu
                      1095
                                          1100
Glu Glu Asn Lys Val Ile Glu Gln Gln Asn Glu Ser Leu Leu His Glu
                                      1115
                  1110
Leu Ala Asn Leu Ser Gln Ser Leu Ile His Ser Leu Ala Asn Ile Gln
               1125
                                1130
Leu Pro His Met Asp Pro Ile Asn Glu Gln Asn Phe Asp Ala Tyr Val
          1140
                             1145
Thr Thr Leu Thr Glu Met Tyr Thr Asn Gln Asp Arg Tyr Gln Ser Pro
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                         1160
                                              1165
Glu Asn Lys Ala Leu Leu Glu Asn Ile Lys Gln Ala Val Arg Gly Ile
    1170
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Gln Val
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ccaagagccc agggatcgcc tcgctgacag accccaaaac acgggccacg ccaccccgtc
ctctaggtac ctgtgccccc agtctcaage atcactccgt gtctccctca catgccttct
gggcctctag ccctcaaaga gctaaagtat gtgagcactt tctcagccct ttaaacggat
240
taagtcatgt catcctcaca aggctgctgt gttttattac ctctgtttca ggtgcaagtc
atccccggga ggagtggtgg ggatgccgcc tgaccctggg ccacctggct gcagcatctg
tgttgatgac caccetectg ceteaggett tgeteetgaa tgttettget etetaggtet
gtecgetect ggeeetgete ttettaacte egtteaagee eeetgggtea eaegteeatg
ctcatcactt caatgacgcg gatgctggcg atccccaaat ctcctaatcc aagtgcagat
540
ct
542
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<212> PRT
<213> Homo sapiens
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1
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Lys Thr Arg Ala Thr Pro Pro Arg Pro Leu Gly Thr Cys Ala Pro Ser
                                                    30
                                25
           20
Leu Lys His His Ser Val Ser Pro Ser His Ala Phe Trp Ala Ser Ser
                            40
Pro Gln Arg Ala Lys Val Cys Glu His Phe Leu Ser Pro Leu Asn Gly
                                            60
                        55
Leu Ser His Val Ile Leu Thr Arg Leu Leu Cys Phe Ile Thr Ser Val
                    70
                                        75
Ser Gly Ala Ser His Pro Arg Glu Glu Trp Trp Gly Cys Arg Leu Thr
                85
                                    90
Leu Gly His Leu Ala Ala Ala Ser Val Leu Met Thr Thr Leu Leu Pro
                                105
           100
Gln Ala Leu Leu Leu Asn Val Leu Ala Leu
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<211> 435
<212> DNA
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gcccagggcg ctggagaccg catggatgag gtcatgaagg aggtgccgcg cgttcgtaag
gatgccggct accegecgct ggtcaccecg tegtcccaga tegtgggaac ccaggeggtg
180
ttcaacgtct tgatgggcaa tggttcgtac aagaatctca ctgccgagtt tgccgacctc
atgctcggct actacggcaa gcccattggc gagctcaatc ctgagatcgt cgagatggcc
300
aagaagcaga ccggcaagga gccgatcgac tgccgtcccg ccgacttgct cgagcctgag
tgggatcagt tggtcgagca ggccaagagt cttgagggct tcgacggctc cgacgaggac
420
gttcttacca acgcg
435
<210> 2588
<211> 145
<212> PRT
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Xaa Asn Ile His Ala Ala Ile Pro Gly Gly Met Leu Ser Asn Met Glu
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10
Ser Gln Leu Glu Ala Gln Gly Ala Gly Asp Arg Met Asp Glu Val Met
                               25
           20
Lys Glu Val Pro Arg Val Arg Lys Asp Ala Gly Tyr Pro Pro Leu Val
                           40
                                               45
Thr Pro Ser Ser Gln Ile Val Gly Thr Gln Ala Val Phe Asn Val Leu
                       55
                                           60
  50
Met Gly Asn Gly Ser Tyr Lys Asn Leu Thr Ala Glu Phe Ala Asp Leu
                    70
                                       75
Met Leu Gly Tyr Tyr Gly Lys Pro Ile Gly Glu Leu Asn Pro Glu Ile
                                   90
               85
Val Glu Met Ala Lys Lys Gln Thr Gly Lys Glu Pro Ile Asp Cys Arg
           100
                               105
                                                   110
Pro Ala Asp Leu Leu Glu Pro Glu Trp Asp Gln Leu Val Glu Gln Ala
                                               125
                           120
Lys Ser Leu Glu Gly Phe Asp Gly Ser Asp Glu Asp Val Leu Thr Asn
                       135
Ala
145
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gaggtcgtcg gcatcgtcga ggtcatggag caggcctact gggcggcgcg acgcggcgc
acgategict acgtegggge getgggeate gacgecaage tggteetgee ggegaaegae
ctgcacggcg gcgccaagac gatcatcggc tgcgccaacg gattgggcgc agtgcgcacc
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360
acqcqt
366
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Pro Ala Lys Lys Asp Met Ala Met Val Phe Gly Ala Thr His Tyr Val
                                   10
Asp Pro Thr Ala Gly Asp Pro Val Glu Gln Ile Arg Ala Leu Thr Arg
                               25
           20
Gly Arg Gly Val Asp Phe Ala Ile Glu Val Val Gly Ile Val Glu Val
                           40
       35
Met Glu Gln Ala Tyr Trp Ala Ala Arg Arg Gly Gly Thr Ile Val Tyr
```

```
60
Val Gly Ala Leu Gly Ile Asp Ala Lys Leu Val Leu Pro Ala Asn Asp
                                       75
                   70
Leu His Gly Gly Ala Lys Thr Ile Ile Gly Cys Ala Asn Gly Leu Gly
               85
                                   90
Ala Val Arg Thr Asp Tyr Ala Lys Met Ile Ser Leu Val Glu Thr Gly
                              105
           100
Arg Leu Asp Leu Gly Gly Met Ile Thr Arg
                           120
      115
<210> 2591
<211> 341
<212> DNA
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agcagcccac gagttgtcca gcaccaggcc aggggtcagt cagcaatgag gacagctcct
tcctgctcca gggcaggccc tgggcagggc aatgctgggg acacggtggg gagtaggcca
cagettetgt gggggagtte ctatggeagg aggateatge ceageagegt ggaagageaa
ggggtgaccc tgcactcgag gctcctggga agacggggag ggttgaggtt acatgaggga
gaggggtcag ttggtgcatt cacagaacag cagggtggcc a
341
<210> 2592
<211> 109
<212> PRT
<213> Homo sapiens
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Met Thr Ser Pro Tyr His Gln Gly His Thr Cys Val Ile Leu Gly Leu
                                   10
Ser Ser Pro Arg Val Val Gln His Gln Ala Arg Gly Gln Ser Ala Met
          20
                               25
                                                   30
Arg Thr Ala Pro Ser Cys Ser Arg Ala Gly Pro Gly Gln Gly Asn Ala
                                                45
                           40
Gly Asp Thr Val Gly Ser Arg Pro Gln Leu Leu Trp Gly Ser Ser Tyr
                       55
                                           60
Gly Arg Arg Ile Met Pro Ser Ser Val Glu Glu Gln Gly Val Thr Leu
                                       75
                   70
65
His Ser Arg Leu Leu Gly Arg Arg Gly Gly Leu Arg Leu His Glu Gly
                                   90
               85
Glu Gly Ser Val Gly Ala Phe Thr Glu Gln Gln Gly Gly
           100
                               105
<210> 2593
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<212> DNA
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gegettteat ggggttttat ggaggtggat gaatatgagg eggatgatat tateggtace
120
ttggcgcgcc aagcggatga agcgggggat tatatgactt atattgtgtc ttcggacctc
gatatgctgc aaatcgtaga tgaaaacacc aagatgtatc gaattctgcg gggattttcg
gatetegagg agatggatae tecagegatt gaagaaaaat atggaatett gaagtegeaa
300
tttttggacc tgaaggcgct gaagggggat aattcggata atattccagg cgtaccaggg
attggtgaga aaaccgcagt gaaactcttg aatgagtatg gtagcttgga ggggatttat
420
aatcatatca aggaaatttc gggggcgaca cagaagaaat tgattgctgg acgcgaatca
gctgagatgt ctcttaagct t
501
<210> 2594
<211> 167
<212> PRT
<213> Homo sapiens
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Arg Val Arg Pro Pro Glu Asp Phe Tyr Ala Gln Ile Pro Leu Leu Arg
1
                5
                                  10
Glu Leu Ile Ser Ala Leu Ser Trp Gly Phe Met Glu Val Asp Glu Tyr
           20
                                25
                                                   30
Glu Ala Asp Asp Ile Ile Gly Thr Leu Ala Arg Gln Ala Asp Glu Ala
                            40
Gly Asp Tyr Met Thr Tyr Ile Val Ser Ser Asp Leu Asp Met Leu Gln
                                            60
                       55
Ile Val Asp Glu Asn Thr Lys Met Tyr Arg Ile Leu Arg Gly Phe Ser
                    70
Asp Leu Glu Glu Met Asp Thr Pro Ala Ile Glu Glu Lys Tyr Gly Ile
               85
                                   90
Leu Lys Ser Gln Phe Leu Asp Leu Lys Ala Leu Lys Gly Asp Asn Ser
           100
                               105
                                                   110
Asp Asn Ile Pro Gly Val Pro Gly Ile Gly Glu Lys Thr Ala Val Lys
       115
                           120
                                               125
Leu Leu Asn Glu Tyr Gly Ser Leu Glu Gly Ile Tyr Asn His Ile Lys
   130
                       135
                                           140
Glu Ile Ser Gly Ala Thr Gln Lys Lys Leu Ile Ala Gly Arg Glu Ser
                   150
                                       155
Ala Glu Met Ser Leu Lys Leu
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<210> 2595
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<212> DNA
<213> Homo sapiens
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agatetteca gatgeaacaa tgateaatta agacacgegg egacatggtg geceetgeet
cacccccag ggatacctgt aatacctgct tcccacttca tgggctacaa tctcatgctg
120
gtcacaattt ctggggctca ctcatataac accaacaaat gggatatttg tgaagaactt
cgcctgcggg agcttgaaga agtcaaggcc agagctgctc agatggaaaa gaccatgcgg
240
tggtggtcgg actgcactgc caactggaga gaaaaatgga gtaaagttcg agctgaaagg
300
aacagtgccg gaaaggaagg aagacaactc agaataaaac tagagatggc gatgaaagaa
teggatecae tgaaacagaa acagagtttg ceaetteaga aggaggeatt agaagetaat
420
qttacccagq atctqaaqct tcctggcttc gtagaagaat cctgtgaaca tacagaccaa
tttcaattga gttcacaaat gcatgagtct atcagagagt atttggtaaa aagacaattt
540
tctacaaagg aggacacaaa taataaggaa caaggtgtgg ttattgattc tctaaaatta
600
agtgaggaga tgaagcccaa tctagatggt gttgatttat tcaacaatgg tggttctgga
aacggtgaaa cgaaaactgg gctgagactg aaagcaataa atctgccttt ggaaaatgaa
720
gtaactgaaa tttcagcttt gcaggtgcat ttggatgaat tccaaaaaaat cttatggaag
gaaagagaaa tgcgcacagc tttggaaaaa gaaatagaga gactggagtc ggctttgtct
840
ctgtggaagt ggaagtatga agaactgaaa gaatcaaagc caaaaaatgt gaaagagttt
gacattette ttggtcaaca taatgatg
928
<210> 2596
<211> 309
<212> PRT
<213> Homo sapiens
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1
                                    10
Trp Pro Leu Pro His Pro Pro Gly Ile Pro Val Ile Pro Ala Ser His
                                                    30
            20
                                25
Phe Met Gly Tyr Asn Leu Met Leu Val Thr Ile Ser Gly Ala His Ser
        35
                            40
Tyr Asn Thr Asn Lys Trp Asp Ile Cys Glu Glu Leu Arg Leu Arg Glu
Leu Glu Glu Val Lys Ala Arg Ala Ala Gln Met Glu Lys Thr Met Arg
Trp Trp Ser Asp Cys Thr Ala Asn Trp Arg Glu Lys Trp Ser Lys Val
                                    90
Arg Ala Glu Arg Asn Ser Ala Gly Lys Glu Gly Arg Gln Leu Arg Ile
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105

100

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Lys Leu Glu Met Ala Met Lys Glu Ser Asp Pro Leu Lys Gln Lys Gln
                            120
Ser Leu Pro Leu Gln Lys Glu Ala Leu Glu Ala Asn Val Thr Gln Asp
                       135
                                            140
Leu Lys Leu Pro Gly Phe Val Glu Glu Ser Cys Glu His Thr Asp Gln
                   150
                                       155
Phe Gln Leu Ser Ser Gln Met His Glu Ser Ile Arg Glu Tyr Leu Val
               165
                                   170
                                                        1.75
Lys Arg Gln Phe Ser Thr Lys Glu Asp Thr Asn Asn Lys Glu Gln Gly
           180
                                185
Val Val Ile Asp Ser Leu Lys Leu Ser Glu Glu Met Lys Pro Asn Leu
                            200
Asp Gly Val Asp Leu Phe Asn Asn Gly Gly Ser Gly Asn Gly Glu Thr
    210
                        215
                                            220
Lys Thr Gly Leu Arg Leu Lys Ala Ile Asn Leu Pro Leu Glu Asn Glu
                   230
                                        235
Val Thr Glu Ile Ser Ala Leu Gln Val His Leu Asp Glu Phe Gln Lys
                                   250
                245
Ile Leu Trp Lys Glu Arg Glu Met Arg Thr Ala Leu Glu Lys Glu Ile
                                265
Glu Arg Leu Glu Ser Ala Leu Ser Leu Trp Lys Trp Lys Tyr Glu Glu
                            280
Leu Lys Glu Ser Lys Pro Lys Asn Val Lys Glu Phe Asp Ile Leu Leu
   290
                        295
Gly Gln His Asn Asp
305
<210> 2597
<211> 631
<212> DNA
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ggctgcacct gcagctgagg gttagcagga attaggagat aacagtagaa tagggctaga
ctgaaaaggc ctttgatgcc aggttaggaa atttacattt tatccacaaa atccaaatcc
180
tcctttaata atgagatgtc tttacaagtt tttgggcaag agtggtatgg ctgacctggt
gtcctgggaa ggaactgtgt ggggatggtg tgcaggactt acctagggtg ggaaaggcac
aagcagcatg gggctgtggc agctaccaga ggtaaaggga catttcaggg aaagacttgg
caggacaaga ccttccttgg atggatggat gaataccaga aacagggacc caagagaaag
gccgagtttc atagggagag aagatgggtc atgtatgagg catgttgagc ttgtactgat
ggtgagacgt ccagtcgaca gtactaccca ctggccagtg agaaatgtgg gaccagggtt
caggaggaaa ctggggccgg aaatgagcat ttggaaggcg ccagggtgga agcgggtggt
600
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tcactccacg agtgctattt cacttacgcg t
631
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<211> 108
<212> PRT
<213> Homo sapiens
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Met Gly Leu Trp Gln Leu Pro Glu Val Lys Gly His Phe Arq Glu Arq
1
                5
Leu Gly Arg Thr Arg Pro Ser Leu Asp Gly Trp Met Asn Thr Arg Asn
            20
                                25
Arg Asp Pro Arg Glu Arg Pro Ser Phe Ile Gly Arg Glu Asp Gly Ser
                            40
Cys Met Arg His Val Glu Leu Val Leu Met Val Arg Arg Pro Val Asp
                        55
                                            60
Ser Thr Thr His Trp Pro Val Arg Asn Val Gly Pro Gly Phe Arg Arg
Lys Leu Gly Pro Glu Met Ser Ile Trp Lys Ala Pro Gly Trp Lys Arg
                                    90
Val Val His Ser Thr Ser Ala Ile Ser Leu Thr Arg
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<211> 356
<212> DNA
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<400> 2599
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aagagctgtg tgaaaatagc aagaaaacca agaacgcggg aatgtgtcaa aggcgtggtc
acagatatee etectaaatg tacaateaag gatttgetae caaaagagaa gageagtaca
240
gaagcagtat tccacacagt ggtgttggaa agacacgaaa gccctgacat tgaagacttt
tccttcaagg aaccccagaa aaatgtgcat gattttgagt gtcaatggag agatgn
356
<210> 2600
<211> 118
<212> PRT
<213> Homo sapiens
<400> 2600
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Ser Leu Gly Leu Cys His Phe Asp Met Asn Ile Ile Ser Met Leu Glu
           20
                                25
                                                    30
Glu Gly Lys Glu Pro Trp Thr Val Lys Ser Cys Val Lys Ile Ala Arg
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40
Lys Pro Arg Thr Arg Glu Cys Val Lys Gly Val Val Thr Asp Ile Pro
Pro Lys Cys Thr Ile Lys Asp Leu Leu Pro Lys Glu Lys Ser Ser Thr
                                       75
                   70
Glu Ala Val Phe His Thr Val Val Leu Glu Arg His Glu Ser Pro Asp
                                   90
              85
Ile Glu Asp Phe Ser Phe Lys Glu Pro Gln Lys Asn Val His Asp Phe
                               105
           100
Glu Cys Gln Trp Arg Asp
       115
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gtcaccgcct tcggcttgcg ccacaacccc aaggacactg cgcgcatgcg ccgcgaaggc
ttgategeet tgeeegaaga ceteggtate egeegeaceg acgeeacecg egaactgttg
gccgccaaga gcgtggccga cctggtggag tggtccggtg gcttgtgcaa cccgcccgcc
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Ala Met Ile Ala Gly Gly Gly Gly Val Thr Ala Phe Gly Leu Arg His
                           40
                                                45
Asn Pro Lys Asp Thr Ala Arg Met Arg Arg Glu Gly Leu Ile Ala Leu
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                       55
Pro Glu Asp Leu Gly Ile Arg Arg Thr Asp Ala Thr Arg Glu Leu Leu
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Ala Ala Lys Ser Val Ala Asp Leu Val Glu Trp Ser Gly Gly Leu Cys
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Asn Pro Pro Ala Lys Phe Arg Ser Trp
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1855

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120
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240
teteggagat gategegtaa cetteattgt egtagaggat ettgeacgea tegatgatge
gettgatete ettggeagtg aagatgattt ceateggggt gttggeegae agataetgae
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420
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423
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Cys Lys Ile Leu Tyr Asp Asn Glu Gly Tyr Ala Ile Ile Ser Glu Ile
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Gly Leu Val Ser Gly Val Asp Arg Val Val Ser Ala Thr Ala Gln Gly
Asn Gln Ser Phe Asp Phe Thr Glu Val Ile Ser Ala Gln Ile Val Ala
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His Leu Thr Thr Tyr His Asn Leu Pro Ser Ala Asn Asn Gly Val Lys
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Leu Gly Val Gly Ala Gln Pro
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120
tttgcatgct gggacctgtt ccactttcaa aatgtgtcat tttggaagga aagggaggaa
180
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354
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Asn Ile Cys Gly Lys Gln Arg Gly Glu Gly Ile Ser Pro Thr Phe Phe
           20
                               25
                                                   30
Ser Thr Ser Ser Leu His Ala Gly Thr Cys Ser Thr Phe Lys Met Cys
       35
                           40
His Phe Gly Arg Lys Gly Arg Asn Asn Tyr Leu Lys Gly Ile His Val
Ser Met Ser Pro Phe Ser Ser Ala Glu Gly Cys Pro Lys Val Pro Pro
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Leu Arg Arg Glu Lys Gly Glu Arg Arg Arg Asp Ser Phe His Gln Met
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Gly His Pro Gly Leu
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297 /
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Phe Leu Cys Cys Phe Phe Phe Leu Arg Thr Asp Leu Ala Pro Ala Pro
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25
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Arg Pro Glu Trp Met Thr Trp Thr Glu Pro Arg Arg Lys Lys Ala Gly
                           40
Met Cys Lys Pro Lys Phe Pro Pro His Gly Gly Pro Asn Asn Trp Ile
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                       55
His Pro Xaa Lys Xaa Pro Xaa Gln Lys Lys Xaa Lys Thr Phe Phe Phe
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                                        75
Leu Xaa Xaa Xaa Pro Gln Lys Asn Gln Lys Lys Lys Phe Lys Lys
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300
ccacc
305
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                                                    30
Val Pro Trp Thr Pro Ile Ala Tyr Glu Lys Ile Phe Phe Pro Pro
       35
                            40
Lys Lys His Pro Pro Leu Ala Ser Val Lys Val Leu Pro Arg Gly Arg
                       55
                                            60
His Leu Gly Cys His Arg Arg Gln Ile Thr Gln Leu Ala Val Pro Phe
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Val Ile Ala Arg Ala Thr Asp Leu Asp Gly Xaa Ala Cys Thr Ala Thr
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Thr Thr
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120
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240
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342
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Val Thr Asn Ala Thr Ile Thr Leu Thr Pro Ser Ala Thr Ala Val Gly
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Ala Gln Val Arg Arg Val Glu Val Ala Thr Ala Asn Gly Thr Ser Thr
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Ile Arg Phe Asp Gln Pro Gly Lys Pro Leu Thr Ala Ala Leu Pro Tyr
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Gly Glu Thr Ser Trp Val Arg Phe Thr Ala Thr Gly Thr Asp Asp Gly
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Asp Ala
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240
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300
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Leu Leu Leu Gly Gly Gly Lys Glu Gly Ser Pro Pro Gly Leu Arg
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Leu Arg Glu Trp Ala Gly Asp Pro Leu Asp Gly Gln Gln Arg Leu Ala
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Ser Val Arg Arg Leu Pro Cys Val Thr Leu Gly Pro Leu Pro Gly Ser
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240
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394
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Ala Asp Phe Leu Asp Val Cys Glu Asp Asp Phe Asp Arg Val Met Arg
Ile Asn Leu Lys Ser Met Phe Leu Cys Gly Gln Ala Ala Ala Arg Glu
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Met Val Lys Arg Asn Ser Gly Cys Ile Ile Asn Met Ser Ser Val Asn
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                                    90
Ala Glu Leu Ala Ile Pro Asn Gln Val Pro Tyr Val Val Ser Lys Gly
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Ile Leu Ser Gly Ser His Leu Asn Val Thr Leu Gly Asn His Lys Ile
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40

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Leu Asn Asp Val Ser Val Ser Phe Gln Ala Gly Val Met His Ala Ile
Leu Gly Pro Asn Gly Ser Gly Lys Thr Thr Leu Val Arg Thr Leu Cys
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Gly Ala Leu Ser Pro Glu Ser Gly Ser Val Lys Phe Asp Gly Thr Asp
              85
                                  90
Leu Ser Thr Met Ser Ala Ser Cys Ile Ala Arg Arg Ile Ala Ile Val
                              105
                                                  110
           100
Trp Gln Ser Ala Thr Ala Pro Ser Asp Leu Thr Val Arg His Leu Val
      115
                          120
                                               125
Gly Tyr Gly Arg Tyr Ala His Thr Pro Trp Trp Gln Ile Arg Asp Thr
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Ser Ala Asp Ser His Val Glu Gln Ala Met Glu Leu Ala Asp Val Thr
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Cys Phe Ala Asp Arg Arg Val Thr Thr Leu Ser
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348
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Thr Asp Gly Asp Gly Pro Gln Glu Gln His Val Ile Phe Leu Asp Asn
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Gly Arg Thr Asp Val Leu Ala Asp Thr Leu Gly Arg Glu Val Leu Arg
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Cys Ile Arg Cys Ala Ser Cys Ile Asn Ile Cys Pro Val Tyr Glu Arg
                                      75
Ala Gly Gly His Pro Tyr Gly Ser Val Tyr Pro Gly Pro Ile Gly Ala
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90
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1260
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Trp Leu Arg Ala His Ala Gln Thr His Ser Leu Pro Arg Leu Ser Lys
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Ala Ser Pro Ser Pro Leu Leu Val Gly Gly Ala Arg Val Leu Leu Gly
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600
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Gly G	Gly		Ser	Gly	Arg	Arg		GIu	Met	GIu	Pro		Pne	Pro	GIN
		35		<b>51</b>		•••	40	•	D	Dwa	1703	45	50×	Dha	Th-
Gly N		vaı	мес	Pne	ASN		Arg	Leu	PIO	PIO	60	1111	ser	FILE	1111
	50		<b>01</b>	C	71-	55	Dwa	D===	D=0	C1-		17-1	ton	Car	Sar
Arg I	Pro	ALA	СТА	ser	70	Ald	PIO	PIO	PIO	75	Cys	vaı	Dea	261	80
65 Ser 1	The	Co-	۸1.	λ1 a	_	λla	בות	Clu	Dro		Dro	Pro	Dro	Δla	•
ser i	1111	Ser	MIA	85	PIO	AIA	AIG	GIU	90	FIU	110	110	rio	95	110
Asp N	VI⊕+	Thr	Dhe		Lvs	Glu	Pro	Δla		Ser	Ala	Ala	Ala		Pro
ASP I	-1C C	1111	100	Lys	Lys	01 u	110	105	7114	-			110		
Ser C	Sln	Ara		Ser	Trn	Glv	Phe		Gln	Ser	Leu	Val		Ile	Lvs
502		115				1	120					125			•
Gln G	Glu		Pro	Ala	Asp	Pro	Glu	Glu	Gln	Gln	Ser	His	His	His	His
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His F	His	His	His	Tyr	Gly	Gly	Leu	Phe	Ala	Gly	Ala	Glu	Glu	Arg	Ser
145					150					155					160
Pro 0	Gly	Leu	Gly	Gly	Gly	Glu	Gly	Gly	Ser	His	Gly	Val	Ile	Gln	Asp
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Leu S	Ser	Ile	Leu	His	Gln	His	Val	Gln	Gln	Gln	Pro	Ala		His	His
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Arg A	Asp		Leu	Leu	Ser	Ser		Ser	Arg	Thr	Asp		His	His	GIA
		195	_	_	_,	_	200			•	•	205	*		D
Thr C		GLu	Pro	Lys	GIn		Thr	Asn	vaı	ьуs	Lys 220	Ата	гÀг	Arg	Pro
Lys F	210	C11.	C	C1-	C1	215	T	212	Tuc	7 ~ ~		Pro	Sar	λl =	Sar
225	PIO	GIU	ser	GIII	230	TIE	гåг	AIA	Lys	235	цуs	FIO	361	ALG	240
Ser I	r.ve	Pro	Ser	T.e.u		GIV	Asp	Glv	Glu		Ala	Ile	Leu	Ser	
002 2	<b>.</b> ,,,		001	245	•	1		1	250	1				255	
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Gln A	Arg	His	Glu	Lys		His	Ser	Arg	Glu		Pro	Phe	Gly	Cys	
305	_	_		_	310		~3 .	_		315		<b>01</b>	•	***	320
Gln C	Cys	Ser	Met		Phe	ııe	GIN	гÀг		HIS	met	GIU	Arg	335	Lys
N 17	Th	rria	C~~	325	c1	Tire	Dro	Th. 125	330		7.00	Thr	Cve		Gln
Arg i	1111	uis	Set	GIV									- y .5	0111	CIII
				1		Lys	FIO		rys	Cys	АЗР				
Tur D	Dhe	Ser	340					345					350	Cvs	Glv
Tyr F	Phe		340				Leu	345				Arg	350	Cys	Gly
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Glu V 3 His T 385	Val 370 Thr	355 Ile Asn	340 Arg Val Met	Thr Lys Gly	Asp Gly Asn 390	Arg Ala 375 Leu	Leu 360 Thr	345 Leu Ser Val	Lys Ala Leu	His Glu Ser 395	Arg Pro 380 Gln	Arg 365 Gly Gly	350 Thr Ser Asn	Ser Thr	Asn Ser 400
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Glu V His T 385 Ser S	Val 370 Thr Ser	355 Ile Asn Arg	340 Arg Val Met Arg	Thr Lys Gly Lys 405	Asp Gly Asn 390 Thr	Arg Ala 375 Leu Lys	Leu 360 Thr Ala Ser	345 Leu Ser Val Lys	Lys Ala Leu Ser 410	His Glu Ser 395 Ile	Arg Pro 380 Gln Ala	Arg 365 Gly Gly	350 Thr Ser Asn Glu	Ser Thr Asn 415	Asn Ser 400 Lys
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	•	515	•	<b>.</b>			520	Dh =	~	*	T	525	N	T	Ŧ
Ser		Tyr	Asp	Asp	ALA	мес 535	GIN	Pne	ser	Lys	ьуs 540	Arg	Arg	ıyı	Leu
Dro	530	71 a	Ser	Sar	Aen		Δla	Dhe	Ser	Tle		Val	Glv	His	Met
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	Ser	Gln	Gln	Ser		Ile	Gln	Ser	Ala		Val	Ser	Val	Leu	
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Asn	Glu	Ala	Pro	Leu	Ser	Leu	Ile	Asp	Ser	Ser	Ala	Leu	Asn	Ala	Glu
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_		595	_	_,	_	_	600	_	_	-1		605		<b>~1</b> .	•
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Dro	610 Pho	) cn	Ile	7.1 a	G1 to		λνα	Va I	Acn	Lon		Thr	Ser	Glv	Glu
625	riic	AJII	110	AIG	630	110	,,,,	vui	ASP	635			001	U- 1	640
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Gln	Gln		Phe	Glu	Lys	Ser		Asn	Ala	Ser	Phe		Leu	Gly	His
<b>01</b>	D)	675	Db -	17. 1	C		680	C	D		776.0	685	***	Th-	ton
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Phe		Glu	Lys	Gln	Ile		Thr	Thr	Ser	Pro		Glu	Cvs	Glv	Phe
705			-7-		710	-1-				715					720
Gly	Gln	Ser	Val	Thr	Ser	Val	Leu	Pro	Ser	Ser	Leu	Pro	Lys	Pro	Pro
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Phe	Gly	Met	Leu	Phe	Gly	Ser	Gln		Gly	Leu	Tyr	Leu		Ala	Leu
_			740			_		745	_	~3	~1		750	•	
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Tla	Acn	755 Ser	Gln	Lare	Λen	T.e.n	760	Thr	Ser	Ser	Ala		Gln	Ser	Ser
110	770	JCI	0111	Dy 3	A311	775	OI u	1111	001	501	780		0111	501	001
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785		•			790		-			795					800
Thr	Gly	Phe	Gln	Ile	Pro	Ser	Gln	Glu	Leu	Ala	Ser	Gln	Ile	Asp	Pro
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Gln	Lys	Asp	Ile	Glu	Pro	Arg	Thr		Tyr	Gln	Ile	Glu		Phe	Ala
<b>~1</b>		D1	820		<b>a</b> 1	D1	•	825	<b>~</b> 1	0	T	17-1	830		mb
GIN	AIA	Phe 835	Gly	ser	GIN	ru6	Lys 840	ser	GTÅ	ser	arg	Va 1 845	PIO	met	inr
Phe	Tle		Asn	Ser	n 2 A	Glv		va1	Asp	His	Ara		Ara	Thr	Ser
	850					855			·P		860				<b>-</b>
Val		Asp	Phe	Ser	Gly		Thr	Asn	Met	Met		Asp	Val	Ser	Glu
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                                                    30
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Leu Val Ala Leu Asn Leu Asp Arg Ile Arg His Trp Ile Gly Cys Gly
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                                    90
Phe Pro Leu His Pro Met Met Ile Thr Asn Ala Glu Arg Leu Arg Arg
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Ile Leu Lys Phe Asn Ser Lys Phe Glu Ser Gly Asn Leu Arg Lys Val
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Asn Ser Gln Phe Asn Tyr Gly Met Gln Pro Leu Met Tyr Ser Val Gln
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Glu Ala Leu Asn Ala Arg Pro Trp Trp Ile Arg Met Gly Thr Asp Ile
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Cys Tyr Tyr Lys Asn His Phe Ser Arg Ser Ser Val Ala Ala Gly Gly
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Gln Lys Gly Lys Ser Tyr Tyr Thr Ile Thr Phe Thr Val Asn Phe Pro
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His Lys Asp Asp Val Cys Tyr Phe Ala Tyr His Tyr Pro Tyr Thr Tyr
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Ser Thr Leu Gln Met His Leu Gln Lys Leu Glu Ser Ala His Asn Pro
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Tyr Cys Asp Tyr His Gly His Ser Arg Lys Lys Asn Val Phe Met Tyr
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Ser Cys Asp Val Val Glu Asp Thr Gly Tyr Arg Thr Leu Pro Lys Ile
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Leu Ser His Ile Ala Pro Ala Phe Cys Met Ser Ser Cys Ser Phe Val
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Val Glu Lys Ser Lys Glu Ser Thr Ala Arg Val Val Trp Arg Glu
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Asp Gln Gly Lys Tyr Lys Gly Leu Gln Ile Gly Thr Arg Glu Leu Glu
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Glu Met Gly Ala Lys Phe Cys Val Gly Leu Leu Arg Leu Lys Arg Leu
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Thr Ser Pro Leu Glu Tyr Asn Leu Pro Ser Ser Leu Leu Asp Phe Glu
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Leu Gln Glu Ala Gly Thr Phe Arg His Thr Leu Trp Lys Arg Val Gln
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Asp Gly Asn Leu Glu Leu Leu Thr Arg Pro Asp Thr Pro Pro Trp Ala
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Arg Asp Leu Trp Met Phe Ile Phe Ser Asp Thr Met Leu Leu Asn Ile
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Pro Leu Val Met Asn Asn Glu Arg His Lys Gly Glu Met Ala Tyr Ile
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Val Val Gln Asn His Met Asn Leu Ser Glu Asn Ala Ser Asn Asn Val
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Pro Phe Ser Trp Lys Ile Lys Asp Tyr Leu Glu Glu Leu Trp Val Gln
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Ala Gln Tyr Ile Thr Asp Ala Glu Gly Leu Pro Lys Lys Phe Val Asp
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Ile Phe Gln Gln Thr Pro Leu Gly Arg Phe Leu Ala Gln Leu His Gly
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Glu Pro Gln Gln Glu Leu Leu Gln Cys Tyr Leu Lys Asp Phe Ile Leu
      195 200
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Leu Thr Met Arg Val Ser Thr Glu Glu Glu Leu Lys Phe Leu Gln Met
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Ala Leu Trp Ser Cys Thr Arg Lys Leu Lys Ala Ala Ser Glu Ala Pro
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Gln Pro Met Glu Pro Thr Val Glu Leu Tyr Ser Pro Arg Glu Asn Phe
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Pro Asp His Asn Arg Leu Val Val Arg Glu Phe Glu Asn Leu Pro Gly
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Glu Thr Glu Glu Lys Ser Ile Leu Leu Glu Ser Asp Asn Glu Asp Glu
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Lys Leu Ser Arg Gly Gln His Cys Ile Glu Ile Ser Ser Leu Pro Gly
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Asp Leu Val Ile Val Glu Lys Asp His Ser Ala Thr Thr Glu Pro Leu
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Asp Val Thr Lys Thr Gln Thr Phe Ser Val Val Pro Asn Gln Asp Lys
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Ser Arg Asp Ile Asp Pro His Val Glu Gly Gin Ile Gly Gln Val Ala
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Gly Lys Arg 305	Glu L	s Ile 310		Pro	Arg	Asn	Gly 315	Glu	Leu	Phe	His	Cys 320
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Leu Leu Gln 370	Lys L	⁄s Ala	Tyr 375	Gln	Pro	Asp	Leu	Val 380	Lys	Leu	Leu	Val
Glu Lys Arg 385	Gln Pl	e Lys 390		Phe	Leu	Gly	Asp 395	Leu	Ser	Ser	Ala	Ser 400
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Gln Val Asn 465		470					475		_			480
Gly Lys Pro	Pro Ti		Pro	Gly	Val	Glu 490	Ala	Arg	Leu	Arg	Arg 495	Tyr
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Ala Gln Ile 515	Leu Gl	n Asn	Gly	Ser 520	Gln	Lys	Pro	Arg	Ser 525	Thr	Thr	Gln
Cys Lys Ser 530			535				_	540			-	
Pro Val Val 545		550					555					560
Leu Pro Arg	56	5				570					575	
His Asp Gln	580				585		_			590		
Pro Ser His 595		-		600		-	_		605			
His Cys Lys 610		_	615	•		-	_	620	_			
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Leu Trp Gly Gly Ala Gly Glu Arg Gly Cys Gln Ala Trp Ala Ala Ala
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Asp Leu Gly Gly His Gly Gly Ser Met Pro Ser Thr Ala Gly Trp Gly
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Gln Arg Val Glu Ala Leu Pro Arg Pro Val Pro Gln Asn Leu Pro Gln
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Pro Gln Met Pro Pro Tyr Ala Phe Ala His Pro Pro Phe Pro Leu Pro
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Pro Val Arg Pro Val Phe Asn Asn Phe Pro Leu Asn Met Gly Pro Ile
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Pro Ala Pro Tyr Val Pro Pro Leu Pro Asn Val Arg Val Asn Tyr Asp
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Phe Gly Pro Ile His Met Pro Leu Glu His Asn Leu Pro Met His Phe
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Gly Pro Gln Pro Arg His Arg Phe
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Lys Leu Glu Met Lys Ala Leu Arg Glu Leu Asp Arg Phe Ser Val Leu
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Asn Ser Gln His Met Phe Glu Val Leu Ala Ala Met Asn His Arg Ser
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Leu Ile Leu Leu Asp Glu Cys Ser Lys Val Val Leu Asp Asn Ile His
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Gly Cys Pro Leu Arg Ile Met Ile Asn Ile Leu Gln Ser Cys Lys Asp
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Leu Gln Tyr His Asn Leu Asp Leu Phe Lys Gly Leu Ala Asp Tyr Val
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Ala Ala Thr Phe Asp Ile Trp Lys Phe Arg Lys Val Leu Phe Ile Leu
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Ile Leu Phe Glu Asn Leu Gly Phe Arg Pro Val Gly Leu Met Asp Leu
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Phe Met Lys Arg Ile Val Glu Asp Pro Glu Ser Leu Asn Met Lys Asn
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Ile Leu Ser Ile Leu His Thr Tyr Ser Ser Leu Asn His Val Tyr Lys
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Cys Gln Asn Lys Glu Gln Phe Val Glu Val Met Ala Ser Ala Leu Thr
                             185
                                                 190
          180
Gly Tyr Leu His Thr Ile Ser Ser Glu Asn Leu Leu Asp Ala Val Tyr
                          200
                                              205
Ser Phe Cys Leu Met Asn Tyr Phe Pro Leu Ala Pro Phe Asn Gln Leu
                                          220
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Leu Gln Lys Asp Ile Ile Ser Glu Leu Leu Thr Ser Asp Asp Met Lys
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Asn Ala Tyr Lys Leu His Thr Leu Asp Thr Cys Leu Lys Leu Asp Asp
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Thr Val Tyr Leu Arg Asp Ile Ala Leu Ser Leu Pro Gln Leu Pro Arg
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265

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Glu Leu Pro Ser Ser His Thr Asn Ala Lys Val Ala Glu Val Leu Ser
                           280
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Ser Leu Leu Gly Gly Glu Gly His Phe Ser Lys Asp Val His Leu Pro
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His Asn Tyr His Ile Asp Phe Glu Ile Arg Met Asp Thr Asn Arg Asn
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Gln Val Leu Pro Leu Ser Asp Val Asp Thr Thr Ser Ala Thr Asp Ile
                                    330
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Gln Arg Val Ala Val Leu Cys Val Ser Arg Ser Ala Tyr Cys Leu Gly
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                               345
                                                    350
Ser Ser His Pro Arg Gly Phe Leu Ala Met Lys Met Arg His Leu Asn
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Ala Met Gly Phe His Val Ile Leu Val Asn Asn Trp Glu Met Asp Lys
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Leu Glu Met Glu Asp Ala Val Thr Phe Leu Lys Thr Lys Ile Tyr Ser
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Val Glu Ala Leu Pro Val Ala Ala Val Asn Val Gln Ser Thr Gln
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840
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Ala Arg Trp Glu His Lys Thr Arg Lys Leu Ser Arg Ala Phe Gly Ser
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Pro Tyr Leu Ala Cys Tyr Ser Leu Ser Val Thr Ile Leu Leu Leu Asn
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Phe Leu Arg Ser His Cys Phe Thr Gln Ala Met Leu Ser Gln Pro Arg
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Met Glu Ser Leu Asp Thr Pro Ala Ala Tyr Ser Leu Gly Leu Ala Leu
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Leu Gly Leu Gly Val Val Leu Val Leu Ser Ser Phe Phe Ala Leu Gly
                              105
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Phe Ala Gly Thr Phe Leu Gly Asp Tyr Phe Gly Ile Leu Lys Glu Ala
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Arg Val Thr Val Phe Pro Phe Asn Ile Leu Asp Asn Pro Met Tyr Trp
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Gly Ser Thr Ala Asn Tyr Leu Gly Trp Ala Ile Met His Ala Ser Pro
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Thr Gly Leu Leu Thr Val Leu Val Ala Leu Thr Tyr Ile Met Ala
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Ser Gly Ser His Lys Arg Ser
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180
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Asp Gln Ala Val Glu Ala Phe Lys Thr Ala Lys Glu Pro Ile Val Val
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Gln Val Leu Arg Arg Thr Pro Arg Thr Lys Met Phe Thr Pro Pro Ser
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Glu Ser Gln Leu Val Asp Thr Gly Thr Gln Thr Asp Ile Thr Phe Glu
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His Ile Met Ala Leu Thr Lys Met Ser Ser Pro Ser Pro Pro Val Leu
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               85
Asp Pro Tyr Leu Leu Pro Glu Glu His Pro Ser Ala His Glu Tyr Tyr
                                                    110
                                105
           100
Asp Pro Asn Asp Tyr Ile Gly Asp Ile His Gln Glu Met Asp Arg Glu
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Lys Leu Gly Leu Thr Val Cys Tyr Arg
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Asn Pro Phe Ser Val Cys Pro Arg Trp Val Pro Gly Leu Cys Trp Arg
Thr Arg His Phe Lys Glu Ser Ile Lys Phe Ile His Glu Cys Arg Leu
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Arg Gly Glu Ser Cys Leu Val His Cys Leu Ala Gly Val Ser Arg Ser
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Val Thr Leu Val Ile Ala Tyr Ile Met Thr Val Thr Asp Phe Gly Trp
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Gln Cys Pro His Cys Arg Ala Pro Leu Gln Leu Arg Glu Leu Val Asn
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Cys Arg Trp Ala Glu Glu Val Thr Gln Gln Leu Asp Thr Leu Gln Leu
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Cys Ser Leu Thr Lys His Glu Glu Asn Glu Lys Asp Lys Cys Glu Asn
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His His Glu Lys Leu Ser Val Phe Cys Trp Thr Cys Lys Lys Cys Ile
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Cys His Gln Cys Ala Leu Trp Gly Gly Met His Gly Gly His Thr Phe
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                                          140
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Lys Pro Leu Ala Glu Ile Tyr Glu Gln His Val Thr Lys Val Asn Glu
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Glu Val Ala Lys Leu Arg Arg Arg Leu Met Glu Leu Ile Ser Leu Val
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Tyr I			Gln	Leu	Glu	Ala		Gln	Thr	Ser	Tyr		Gln	Gln	Ile
		135	_		_	_	440		~3		_	445	m)	<b></b> 1	•
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ser		HIS	GIY	Leu	Asp		ьys	гув	GIA	сту		ASII	Leu	116	PIO
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Arg Val Arg Met Gln Gly Val Gly Pro Ser Trp Gly Gln Ser Pro Gly
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                              105
                                                   110
Pro Gly Met Arg Glu Leu Ser His Leu Leu Pro Cys Val Ser Ala Pro
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                                               125
Ser Gln Leu Leu Ser Cys Ser Leu Gly Gly Leu Val Arg Asn Leu Gly
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Thr Arg Ala Ser Ala Ser Arg Glu Trp His Lys Ala Ala Gly Thr Glu
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120
ggctgcagac aaagtgcggc aacagggact ccaccaggcc atggagctca tcccacaaga
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Leu Val Ser Ala Ala Ala Ala Ser Arg Pro Trp Met Ala Arg Cys Ala
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Val Gly Arg His Arg Gly Cys Thr Arg Thr Gln Pro Asp Leu Gly Gln
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Phe Ala Pro Thr Leu Leu His Ser Arg Gly Pro Gly Ser Thr Cys Gln
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Cys Gly Ser Gln Asn Ala Gln Ala Lys Tyr Arg Asp Gln Leu Thr Ile
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Ser Arg Gly Gln Met Thr Gln Thr His Arg Ser Ala Phe Val Ser Lys
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40
Asn Asn Ser Tyr Ser Leu Ala Phe Leu Ala Gly Lys Leu Asn Ser Lys
Val Glu Arg Ser Gln Ser Cys Ser Asp Thr Ala Gln Glu Arg Ala Lys
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Ser Arg Val Arg Ala Val Pro Gly Asn Lys Ala Lys Val His Leu Ser
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Met Val Met Lys
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240
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Val Val Ile Phe Val Val Phe Leu Met Ala Leu Ser Glu Asn Ala Val
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Leu Ile Leu Leu Ile His Cys Asp Thr Tyr Leu His Thr Pro Met Tyr
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Phe Phe Ile Ser Gln Leu Ser Leu Met Asp Met Ala Tyr Ile Ser Val
Thr Val Pro Lys Met Leu Leu Asp Gln Val Met Gly Val Asn Lys Ile
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90
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Ser Ala Pro Glu Cys Gly Met Gln Met Phe Leu Tyr Leu Thr Leu Ala
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Gly Ser Glu Phe Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val
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Cys Leu Phe Leu Ala
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Ala Gly Met Ala Gln Leu Arg Glu Leu Tyr Leu Thr Gly Asn Arg Leu
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Arg Ser Arg Ala Leu Gly Pro Arg Ala Trp Val Asp Leu Ala His Leu
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Gln Leu Leu Asp Ile Ala Gly Asn Gln Leu Thr Glu Ile Pro Glu Gly
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Leu Pro Pro Ser Leu Glu Tyr Leu Tyr Leu Gln Asn Asn Lys Ile Ser
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Phe Arg
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180

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                                                    30
Leu Thr Lys Leu Pro Arg Leu Val Ser Asn Ser Trp Pro Gln Glu Ile
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Asp Lys Leu Gly Gly Arg Val Ala Ser
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Val Asp Gly Lys Val Tyr Leu Ser Gly Leu Arg Ser Asn Leu Ser Met
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Ile Ser His Gly Gln Arg Gln Arg Val Val His Asp Phe Pro Lys Tyr
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Ser Val Lys Val Leu Pro Trp Leu Ser Pro Glu Val Leu Gln Gln Asn
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Leu Gln Gly Tyr Asp Ala Lys Ser Asp Ile Tyr Ser Val Gly Ile Thr
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                                                   110
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                                                125
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Thr Gln Met Leu Leu Glu Lys Leu Asn Gly Thr Val Pro Cys Leu Leu
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Ile Lys Ala Ile Pro Glu Lys Ala Phe Met Gly Asn Pro Leu Leu Gln
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Thr Ile His Phe Tyr Asp Asn Pro Ile Gln Phe Val Gly Arg Ser Ala
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Phe Gln Tyr Leu Pro Lys Leu His Thr Leu Ser Leu Asn Gly Ala Met
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                                            125
Leu Thr Leu Thr Arg Ala Gly Ile Arg Leu Leu Pro Ser Gly Met Cys
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            135
Gln Gln Leu Pro Arg Leu Arg Val Leu Glu Leu Ser His Asn Gln Ile
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Glu Glu Leu Pro Ser Leu His Arg Cys Gln Lys Leu Glu Glu Ile Gly
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Leu Gln His Asn Arg Ile Trp Glu Ile Gly Ala Asp Thr Phe Ser Gln
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Leu Ser Ser Leu Gln Ala Leu Asp Leu Arg Trp Asn Ala Ile Arg Ser
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                                             205
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Leu Thr Asp Asn Gln Leu Thr Thr Leu Pro Leu Ala Gly Leu Gly Gly
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1380

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Val Val Asp Ile Ala His Ser Pro Pro Ala Lys Lys Ser Thr Gly
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Ser Ser Thr Trp Pro Leu Asp Pro Gly Val Glu Val Thr Leu Thr Met
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Lys Ala Ala Ser Gly Ser Thr Gly Asp Gln Lys Val Gln Ile Ser Tyr
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Tyr Gly Pro Lys Thr Pro Pro Val Lys Ala Leu Leu Tyr Leu Thr Ala
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Pro Thr Arg Ala Val Lys Asp Gln Arg Thr Trp Thr Trp Gly Pro Cys
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145	60~	712	Mot	λcn		Glu	Acn	λen	Glu		T.e.ii	Asn	Ser	Glu	
261	261	MIG	Mec	165	Cys	GIU	rsb	Yab	170	<b>741</b>	Deu	лор		175	nop
Lou	Gla	Acn	Met		ī.eu	Met	Thr	Len		Thr	Lvs	Thr	Pro		Asp
Бец	GIII	nop	180					185			-,-		190	-1-	
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Pro		Glu	Val	TVY	Ala	Суз	Ser	Tle	Phe	Glu		Glu	Asp	Phe	Leu
305	01	014	Vu_	- 1 -	310	-70	001			315					320
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Cys	Pro	Glu	Glu	Glu	Asn	Met	Asp	Asp	Gln	Trp	Met	Gln	Asp	Glu	Met
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Mat	370	חאם	7 cm	Dho	C1.	375 Tyr	17-1	Thr	λνα	Gly		Gla	Thr	Gly	Glv
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Ser	Cys	Tyr	Pro	Ser	Asn	Asp	Ser	Arg	Gln	Met	His	Gln	Ala	Leu	Gln
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Asp		Leu	Ser	Ala	Gln	Gln	Val	Gln	Ala	Pro		Lys	Leu	Tyr	Ser
_	450			1	<b>01</b>	455	11-1		<b>~1</b>	Dho	460	C	Dho	17n 1	משמ
_	Trp	Leu	Ser	vai	470	His	val	Asp	GIU	475	Leu	ser	Pne	vai	480
465	Dro	λen	Ara	Tve		Phe	Δra	f.e.ii	I.e.i		Δla	Ser	Pro	Ara	
ALG	110	лар				1110								495	
Cvs	Tvr	Lvs				Glu					Gly	His	Gly		Ala
-,-	- 4	•	500					505			•		510		
Leu	Leu	Phe		Gly	Ile	Lys	Lys	Lys	Lys	Gln	Gln	Lys	Ile	Lys	Asn
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Ile	Leu	Ser	Asn	Lys	Thr	Leu	Arg	Glu	His	Asn	Ser	Phe	Val	Glu	Arg
	530					535					540				
_	Ile	Asp	Trp	Asn		Glu	Leu	Leu	Lys		Glu	Leu	Gly	Leu	
545	_	_	- 7	~ 7	550	~ .	_			555	<b>.</b>		• • • •	~1	560
Glu	Ser	Asp	IIe	TTE	Asp	Ile	Pro	Gin	Leu	rue	ьys	Leu	ьys	GIU	₽ne

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Thr Gln Pro Ala Asp Val Leu Arg Trp Ser Ala Gly Tyr Phe Ser Ala
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Val Ala Thr Gln Lys Thr Asp Thr Gly Leu Thr Gln Gly Leu Lys
Val Leu His Lys Gln Cys His His Lys Arg Tyr Val Glu Leu Thr Asp
Leu Glu Gln Lys Trp Lys Asn Leu Cys Leu Pro Lys Glu Lys Phe Lys
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                                105
                                                    110
Ala Leu Leu Gln Leu Asp Pro Cys Glu Asn Lys Ile Lys Trp Ile Asn
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120
Phe Leu Ala Leu Gly Cys Ser Met Leu Gly Gly Ser Leu Asn Thr Ala
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Leu Lys His Leu Cys Glu Ile Leu Thr Asp Asp Pro Glu Ala Gly Pro
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Gln Arg Asn Arg Asp Phe Leu Leu Ala Leu Glu Arg Asp Arg Leu Lys
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Tyr Glu Ser Gln Lys Ser Lys Ser Ser Ser Val Ala Val Gly Asn Asp
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Ser Pro Ile Cys Ile Ala Arg Glu Cys Ser Gly Pro Trp Gly Lys Gly
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                                            60
Leu Leu Pro Pro Glu Gly Thr Leu Leu Pro Arg Pro Leu Leu Gly Glu
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Ala Ser Arg Asn Ile Val Gln Asn Tyr Arg Ala Gly Val Val Thr Pro
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Gly Ile Thr Glu Asp Gln Leu Trp Arg Ala Lys Tyr Val Tyr Asp Ser
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90

85

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Ser Phe Asn Ala Ile Val Asn Tyr Ser Asn Arg Ser Gly Asp Thr Pro
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Ile Thr Val Arg Gln Leu Gly Thr Ala Tyr Val Ser Ala Thr Thr Gly
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Ala Val Ala Thr Ala Leu Gly Leu Lys Ser Leu Thr Lys His Leu Pro
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Pro Leu Val Gly Arg Phe Val Pro Phe Ala Ala Val Ala Ala Ala Asn
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                                                    190
Cys Ile Asn Ile Pro Leu Met Arg Gln Arg Glu Leu Gln Val Gly Ile
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                            200
                                                205
Pro Val Thr Asp Glu Ala Gly Gln Arg Leu Gly His Ser Val Thr Ala
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Cys Glu Leu Val Gly Leu Asp Ile Gln Asp Glu Met Gly Arg His Glu
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Val Gly His Ile Asp Asn Ser Met Lys Ile Pro Leu Asn Asn Gly Ala
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Gly Cys Arg Phe Glu Gly Gln Phe Ser Ile Asn Lys Val Pro Gly Asn
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                                  170
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Gln Asn Ile His Gly Ala Phe Asn Ala Leu Gly Gly Ala Asp Arg Leu
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235

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                                                285
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Glu Gln Ala Glu 705 Gln Thr	Asp Glu Asn Ile Val 690 Lys Glu Gln Ala	Lys Met Ser 675 Leu Lys Lys Ala Trp 755	Gln Lys 660 Asp Lys Gln Leu Gln 740 Thr	Leu 645 Gln Leu Glu Leu Arg 725 Ala	Arg Lys Ala Gln 710 Leu Ser Glu	Arg Glu His Met His 695 Val Gln Phe Lys Leu	Thr Glu Lys 680 His Lys Gly Val 760	Val Asn 665 Ile Glu Leu Glu Arg 745 Arg	Val 650 Glu Ala Ala Glu Met 730 Glu	635 Ser Thr Glu Thr Glu 715 Glu Arg Leu	Asp Cys His Leu Cys 700 Glu Leu Glu Thr	Lys Thr Gln 685 Arg Lys Lys Gly Gln 765	Lys Leu 670 Gly His Thr Ala Leu 750 Glu	Ala 655 Glu Gln Glu His Arg 735 Gln Leu	Glu Ala Glu Leu 720 Leu Ser Glu
Glu Gln Ala Glu 705 Gln Thr Ser	Asp Glu Asn Ile Val 690 Lys Glu Gln Ala Phe 770	Lys Met Ser 675 Leu Lys Lys Ala Trp 755 His	Gln Lys 660 Asp Lys Gln Leu Gln 740 Thr	Leu 645 Gln Leu Glu Leu Arg 725 Ala Glu	630 Asp Arg Lys Ala Gln 710 Leu Ser Glu Gln	Arg Glu His Met His 695 Val Gln Phe Lys Leu 775	Thr Glu Lys 680 His Lys Gly Val 760 Thr	Val Asn 665 Ile Glu Leu Glu Arg 745 Arg Ser	Val 650 Glu Ala Ala Glu Met 730 Glu Gly Leu	635 Ser Thr Glu Thr Glu 715 Glu Arg Leu Val	Asp Cys His Leu Cys 700 Glu Leu Glu Thr	Lys Thr Gln 685 Arg Lys Lys Gly Gln 765 Lys	Lys Leu 670 Gly His Thr Ala Leu 750 Glu His	Ala 655 Glu Gln Glu His Arg 735 Gln Leu	Glu Ala Glu Leu 720 Leu Ser Glu Leu
Glu Gln Ala Glu 705 Gln Thr Ser	Asp Glu Asn Ile Val 690 Lys Glu Gln Ala Phe 770	Lys Met Ser 675 Leu Lys Lys Ala Trp 755 His	Gln Lys 660 Asp Lys Gln Leu Gln 740 Thr	Leu 645 Gln Leu Glu Leu Arg 725 Ala Glu	630 Asp Arg Lys Ala Gln 710 Leu Ser Glu Gln	Arg Glu His Met His 695 Val Gln Phe Lys Leu 775	Thr Glu Lys 680 His Lys Gly Val 760 Thr	Val Asn 665 Ile Glu Leu Glu Arg 745 Arg Ser	Val 650 Glu Ala Ala Glu Met 730 Glu	635 Ser Thr Glu Thr Glu 715 Glu Arg Leu Val	Asp Cys His Leu Cys 700 Glu Leu Glu Thr	Lys Thr Gln 685 Arg Lys Lys Gly Gln 765 Lys	Lys Leu 670 Gly His Thr Ala Leu 750 Glu His	Ala 655 Glu Gln Glu His Arg 735 Gln Leu	Glu Ala Glu Leu 720 Leu Ser Glu Leu
Glu Glu 705 Gln Thr Ser Glu Gln	Asp Glu Asn Ile Val 690 Lys Glu Gln Ala Phe 770 Lys	Lys Met Ser 675 Leu Lys Lys Ala Trp 755 His	Gln Lys 660 Asp Lys Gln Leu Gln 740 Thr Gln	Leu 645 Gln Leu Glu Leu Arg 725 Ala Glu Glu	630 Asp Arg Lys Ala Gln 710 Leu Ser Glu Gln Arg 790	Arg Glu His Met His 695 Val Gln Phe Lys Leu 775 Lys	Thr Glu Lys 680 His Lys Gly Val 760 Thr	Val Asn 665 Ile Glu Leu Glu Arg 745 Arg Ser Leu	Val 650 Glu Ala Ala Glu Met 730 Glu Gly Leu	635 Ser Thr Glu Thr Glu Arg Leu Val	Asp Cys His Leu Cys 700 Glu Leu Glu Thr Glu 780 Lys	Lys Thr Gln 685 Arg Lys Gly Gln 765 Lys His	Lys Leu 670 Gly His Thr Ala Leu 750 Glu His Gln	Ala 655 Glu Gln Glu His Arg 735 Gln Leu Thr	Glu Ala Glu Leu 720 Leu Ser Glu Leu Glu 800
Glu Glu 705 Gln Thr Ser Glu 785 Leu	Asp Glu Asn Ile Val 690 Lys Glu Gln Ala Phe 770 Lys	Lys Met Ser 675 Leu Lys Lys Ala Trp 755 His Glu Glu	Gln Lys 660 Asp Lys Gln Leu Gln 740 Thr Gln Glu	Leu 645 Gln Leu Arg 725 Ala Glu Leu Arg 805	630 Asp Arg Lys Ala Gln 710 Leu Ser Glu Gln Arg 790 Glu	Arg Glu His Met His 695 Val Gln Phe Lys Leu 775 Lys	Thr Glu Lys 680 His Lys Gly Val 760 Thr Glu Met	Val Asn 665 Ile Glu Leu Glu Arg 745 Arg Ser Leu Glu	Val 650 Glu Ala Ala Glu Met 730 Glu Gly Leu Leu	635 Ser Thr Glu Thr Glu Arg Leu Val Glu 795 Glu	Asp Cys His Leu Cys 700 Glu Leu Glu Thr Glu 780 Lys	Lys Thr Gln 685 Arg Lys Gly Gln 765 Lys His	Lys Leu 670 Gly His Thr Ala Leu 750 Glu His Gln Arg	Ala 655 Glu Gln Glu His Arg 735 Gln Leu Thr Arg 815	Glu Ala Glu Leu 720 Leu Ser Glu Leu Glu 800 Thr
Glu Glu 705 Gln Thr Ser Glu 785 Leu	Asp Glu Asn Ile Val 690 Lys Glu Gln Ala Phe 770 Lys	Lys Met Ser 675 Leu Lys Lys Ala Trp 755 His Glu Glu	Gln Lys 660 Asp Lys Gln Leu Gln 740 Thr Gln Glu	Leu 645 Gln Leu Arg 725 Ala Glu Leu Arg 805	630 Asp Arg Lys Ala Gln 710 Leu Ser Glu Gln Arg 790 Glu	Arg Glu His Met His 695 Val Gln Phe Lys Leu 775 Lys	Thr Glu Lys 680 His Lys Gly Val 760 Thr Glu Met	Val Asn 665 Ile Glu Leu Glu Arg 745 Arg Ser Leu Glu	Val 650 Glu Ala Ala Glu Met 730 Glu Gly Leu Leu	635 Ser Thr Glu Thr Glu Arg Leu Val Glu 795 Glu	Asp Cys His Leu Cys 700 Glu Leu Glu Thr Glu 780 Lys	Lys Thr Gln 685 Arg Lys Gly Gln 765 Lys His	Lys Leu 670 Gly His Thr Ala Leu 750 Glu His Gln Arg	Ala 655 Glu Gln Glu His Arg 735 Gln Leu Thr Arg 815	Glu Ala Glu Leu 720 Leu Ser Glu Leu Glu 800 Thr
Glu Glu 705 Gln Thr Ser Gln Glu 785 Leu Ser	Asp Glu Asn Ile Val 690 Lys Glu Gln Ala Phe 770 Lys Gln Gln	Lys Met Ser 675 Leu Lys Lys Ala Trp 755 His Glu Glu Ile	Gln Lys 660 Asp Lys Gln Leu Gln 740 Thr Gln Glu Gly Glu 820	Leu 645 Gln Leu Arg 725 Ala Glu Leu Arg 810 Arg 810 Ala	630 Asp Arg Lys Ala Gln 710 Leu Ser Glu Gln Arg 790 Glu Gln	Arg Glu His Met His 695 Val Gln Phe Lys Leu 775 Lys Lys	Thr Glu Lys 680 His Lys Gly Val 760 Thr Glu Met Gln	Val Asn 665 Ile Glu Leu Glu Arg 745 Arg Ser Leu Glu Ser 825	Val 650 Glu Ala Ala Glu Met 730 Glu Gly Leu Leu	635 Ser Thr Glu Thr Glu 715 Glu Arg Leu Val Glu 795 Glu Cys	Asp Cys His Leu Cys 700 Glu Leu Glu Thr Glu 780 Lys Cys Gln	Lys Thr Gln 685 Arg Lys Gly Gln 765 Lys His Asn	Lys Leu 670 Gly His Thr Ala Leu 750 Glu His Gln Arg Val 830	Ala 655 Glu Gln Glu His Arg 735 Gln Leu Arg Arg 815 Thr	Glu Ala Glu Leu 720 Leu Ser Glu Leu Glu 800 Thr

225			240					845			
835		a1 a1.	B40		<b>61</b>	c1	T		C) n	T	C211
Leu Lys Asp	Leu Gin			Arg	GIU	GIU	860	261	GIII	пр	Gru
850 Phe Glu Lys	Non Cl.	85		Glu	Cve	Δ1 a		Δla	Gln	Glu	T.e.11
870	ASP GIU	875	GIII	GIU	Cys	880	UI u	n.u	<b></b>	014	
Leu Lys Glu	The Lou		- Glu	Tvc	Thr		Ser	T.em	Val	T.em	Thr
Leu Lys Giu	885	DAS VI	, Giu	БуЗ	890	1111	561	Duu	• • • •	895	••••
Gln Glu Arg		Lan Gl	LIVE	Thr		1.vg	Agn	His	t.eu		Ser
_	900	Deu Gi	I Dys	905	* y *	<i>D</i> <sub>1</sub> <i>S</i>			910		001
Met Val Val		Gln Gl	ı Len		Gln	Asn	Len	Glu		Leu	Ara
Met vai vai	GIU AIG	GIII GI	920	псс	<b>J</b> 1	nop		925		200	**** 9
Asn Val Ser	Glu Thr	Gln Gl		Leu	Leu	Ser	Asp		Ile	Leu	Glu
930	010 1	93					940				
Leu Lys Ser	Ser His			Leu	Ara	Glu		Glu	Glu	Val	Leu
945		950	,			955					960
Cys Gln Gln	Glv Val		ı Gln	Leu	Ala		Gln	Arg	Leu	Glu	Arg
0,70 0000 0000	965				970					975	•
Leu Glu Met	Glu His	Asp Gl	ı Glu	Arq	Gln	Glu	Met	Met	Ser	Lys	Leu
	980	•		985					990	_	
Leu Ala Met		Ile Hi	s Lys	Ala	Thr	Cys	Glu	Thr	Ala	Asp	Arg
995			100			-		100		_	_
Glu Arg Ala	Glu Met	Ser Th	c Glu	Ile	Ser	Arg	Leu	Gln	Ser	Lys	Ile
1010		10					1020				
Lys Glu Met	Gln Gln	Ala Th	Ser	Pro	Leu	Ser	Met	Leu	Gln	Ser	Gly
1025		1030				1035					1040
Cys Gln Val	Ile Gly	Glu Gl	ı Glu	Val	Glu	Gly	Asp	Gly	Ala	Leu	Ser
-	104				1050					1055	
											-
Leu Leu Gln			ı Leu	Leu			Asn	Gly	Asp		-
	Lys Gly 1060	Glu Gl		106	Glu 5	Glu			1070	Val	Leu
	Lys Gly 1060	Glu Gl		106	Glu 5	Glu			1070	Val	Leu
Leu Ser Leu 1075	Lys Gly 1060 Gln Arg	Glu Gl Ala Hi	5 Glu 108	106! Gln 0	Glu 5 Ala	Glu Val	Lys	Glu 1085	1070 Asn	Val Val	Leu Lys
Leu Ser Leu	Lys Gly 1060 Gln Arg	Glu Gl Ala Hi	5 Glu 108	106! Gln 0	Glu 5 Ala	Glu Val	Lys Leu	Glu 1085 Gln	1070 Asn	Val Val	Leu Lys
Leu Ser Leu 1075 Met Ala Thr 1090	Lys Gly 1060 Gln Arg Glu Ile	Glu Gl Ala Hi Ser Ar 10	s Glu 108 g Leu 95	1069 Gln O Gln	Glu 5 Ala Gln	Glu Val Arg	Lys Leu 1100	Glu 1085 Gln	1070 Asn S Lys	Val Val Leu	Leu Lys Glu
Leu Ser Leu 1075 Met Ala Thr	Lys Gly 1060 Gln Arg Glu Ile	Glu Gl Ala Hi Ser Ar 10 Ser Se	s Glu 108 g Leu 95	1069 Gln O Gln	Glu 5 Ala Gln	Glu Val Arg Glu	Lys Leu 1100 Pro	Glu 1085 Gln	1070 Asn S Lys	Val Val Leu	Leu Lys Glu Phe
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105	Lys Gly 1060 Gln Arg Glu Ile Val Met	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110	s Glu 108 J Leu 95 r Cys	1069 Gln O Gln Leu	Glu Ala Gln Asp	Glu Val Arg Glu 1115	Lys Leu 1100 Pro	Glu 1089 Gln O Ala	1070 Asn S Lys Thr	Val Val Leu Glu	Leu Lys Glu Phe 1120
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu	Lys Gly 1060 Gln Arg Glu Ile Val Met	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl	s Glu 108 J Leu 95 r Cys	1069 Gln O Gln Leu	Glu Ala Gln Asp	Glu Val Arg Glu 1115 Phe	Lys Leu 1100 Pro	Glu 1089 Gln O Ala	1070 Asn S Lys Thr	Val Val Leu Glu Asn	Leu Lys Glu Phe 1120 Arg
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5	Glu 108 Leu 95 Cys	1069 Gln O Gln Leu Glu	Glu Ala Gln Asp Pro 1130	Val Arg Glu 1115 Phe	Lys Leu 1100 Pro Leu	Glu 1085 Gln ) Ala Gln	1070 Asn S Lys Thr	Val Val Leu Glu Asn 1135	Leu Lys Glu Phe 1120 Arg
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5	Glu 108 Leu 95 Cys	1069 Gln O Gln Leu Glu	Glu Ala Gln Asp Pro 1130 Arg	Val Arg Glu 1115 Phe	Lys Leu 1100 Pro Leu	Glu 1085 Gln ) Ala Gln	1070 Asn Lys Thr Gln Ser	Val Val Leu Glu Asn 1135	Leu Lys Glu Phe 1120 Arg
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl Gly Va	s Glu 108 g Leu 95 r Cys n Thr	Gln  Gln  Gln  Gln  Leu  Glu  Arg  1149	Glu Ala Gln Asp Pro 1130 Arg	Val Arg Glu 1115 Phe His	Lys Leu 1100 Pro Leu Val	Glu 1089 Gln Ala Gln Leu	Lys Thr Gln Ser	Val Val Leu Glu Asn 1135 Asp	Leu Lys Glu Phe 1120 Arg
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl Gly Va	S Glu 108 Leu 95 C Cys Thr Thr	Gln  Gln  Gln  Leu  Glu  Arg  1145  Gly	Glu Ala Gln Asp Pro 1130 Arg	Val Arg Glu 1115 Phe His	Lys Leu 1100 Pro Leu Val	Glu 1089 Gln Ala Gln Leu	Lys Thr Gln Ser 1156 Ser	Val Val Leu Glu Asn 1135 Asp	Leu Lys Glu Phe 1120 Arg
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl Gly Va Arg As	Glu 108 J Leu 95 c Cys n Thr L Thr	Gln  Gln  Gln  Glu  Glu  Arg  114: Gly  O	Glu Ala Gln Asp Pro 1130 Arg Ser	Glu Val Arg Glu 1119 Phe His	Lys Leu 1100 Pro Leu Val	Glu 1085 Gln Ala Gln Leu Thr	Lys Thr Gln Ser 1150 Ser	Val Val Leu Glu Asn 1135 Asp Ser	Leu Lys Glu Phe 1120 Arg Leu Val
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il	Glu 108 G Leu 95 r Cys n Thr L Thr 116 e Glu	Gln  Gln  Gln  Glu  Glu  Arg  114: Gly  O	Glu Ala Gln Asp Pro 1130 Arg Ser	Glu Val Arg Glu 1119 Phe His	Lys Leu 1100 Pro Leu Val Gly	Glu 1085 Gln Ala Gln Leu Thr 1165 Ser	Lys Thr Gln Ser 1150 Ser	Val Val Leu Glu Asn 1135 Asp Ser	Leu Lys Glu Phe 1120 Arg Leu Val
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val Glu Val	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl Gly Va Arg As Lys Il 11	Glu 108 G Leu 95 C Cys n Thr L Thr 116 G Glu 75	Glu Arg 1149 Gly Glu Glu	Glu Ala Gln Asp Pro 1130 Arg Ser	Glu Arg Glu 1115 Phe His Thr	Lys Leu 1100 Pro Leu Val Gly Ala 1180	Glu 1085 Gln Ala Gln Leu Thr 1165 Ser	Lys Thr Gln Ser 1150 Ser Val	Val Val Leu Glu Asn 1135 Asp Ser Glu	Leu Lys Glu Phe 1120 Arg Leu Val
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val Glu Val	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il 11 Asn Se	Glu 108 G Leu 95 C Cys n Thr L Thr 116 G Glu 75	Glu Arg 1149 Gly Glu Glu	Glu Ala Gln Asp Pro 1130 Arg Ser	Glu Val Arg Glu 1115 Phe His Thr Glu Arg	Lys Leu 1100 Pro Leu Val Gly Ala 1180	Glu 1085 Gln Ala Gln Leu Thr 1165 Ser	Lys Thr Gln Ser 1150 Ser Val	Val Val Leu Glu Asn 1135 Asp Ser Glu	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu 1185	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val Glu Val Leu Glu	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl Gly Va Arg As Lys Il Asn Se 1190	S Glu 108 3 Leu 95 7 Cys 1 Thr 1 Thr 2 Leu 116 116 117 117 118 119 119 119 119 119 119 119 119 119	106: Gln O Gln Leu Glu Arg 114: Gly O Glu	Glu Ala Gln Asp Pro 1130 Arg Ser Ser	Glu Val Arg Glu 1119 Phe His Thr Glu Arg 1199	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Thr	Glu 1089 Gln Ala Gln Leu Thr 1169 Ser	1070 Asn Lys Thr Gln Ser 1150 Ser Val	Val Val Leu Glu Asn 1135 Asp Ser Glu Trp	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val Glu Val Leu Glu His Ile	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il 11 Asn Se 1190 Ser Le	S Glu 108 3 Leu 95 7 Cys 1 Thr 1 Thr 2 Leu 116 116 117 117 118 119 119 119 119 119 119 119 119 119	106: Gln O Gln Leu Glu Arg 114: Gly O Glu	Glu Ala Gln Asp Pro 1130 Arg Ser Ser Thr	Glu Val Arg Glu 1119 Phe His Thr Glu Arg 1199 Gln	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Thr	Glu 1089 Gln Ala Gln Leu Thr 1169 Ser	1070 Asn Lys Thr Gln Ser 1150 Ser Val	Val Val Leu Glu Asn 1139 Asp Ser Glu Trp	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200 Cys
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu 1185 Leu Lys Asn	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val Glu Val Leu Glu His Ile 120	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il 11 Asn Se 1190 Ser Le 5	Glu 108 J Leu 55 r Cys n Thr L Thr Leu 116 e Glu 75 r Glu Leu	O Glu	Glu Ala Gln Asp Pro 1130 Arg Ser Thr Glu 1210	Glu Val Arg Glu 1119 Phe His Thr Glu Arg 1199 Gln	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Thr	Glu 1089 Gln Ala Gln Leu Thr 1169 Ser Glu Met	Lys  Thr  Gln  Ser  1150  Ser  Val  Ser  Met	Val Val Val Leu Glu Asn 1135 Asp Ser Glu Trp Phe 1215	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200 Cys
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu 1185 Leu Lys Asn	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu 1140 Glu Val Glu Val Leu Glu His Ile 120 Asp Leu	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il 11 Asn Se 1190 Ser Le 5	Glu 108 J Leu 55 r Cys n Thr L Thr Leu 116 e Glu 75 r Glu Leu	1065 Gln 0 Gln Glu Glu Arg 1145 Gly 0 Glu Glu	Glu Asp Pro 1130 Arg Ser Thr Glu 1210 Lys	Glu Val Arg Glu 1119 Phe His Thr Glu Arg 1199 Gln	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Thr	Glu 1089 Gln Ala Gln Leu Thr 1169 Ser Glu Met	1070 Asn Lys Thr Gln Ser 1150 Ser Val Ser Met Leu	Val Val Val Leu Glu Asn 1139 Asp Ser Glu Trp Phe 1215 Phe	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200 Cys
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu 1185 Leu Lys Asn Ala Asp Cys	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu Val Glu Val Glu Val Leu Glu His Ile 120 Asp Leu	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il 11 Asn Se 1190 Ser Le 5 Ala Se	S Glu 108 3 Leu 95 7 Cys 1 Thr 1 Thr 116 6 Glu 75 7 Glu 1 Leu 1 Clu	1069 Gln O Gln Leu Glu Arg 1149 Gly O Glu Glu Glu	Glu Asp Pro 1130 Arg Ser Ser Thr Glu 1210 Lys	Glu Val Arg Glu 1119 Phe His Thr Glu Arg Glu Gln Gln	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Thr Leu Glu	Glu 1085 Gln Ala Gln Leu Thr 1165 Ser ) Glu Met Leu	1070 Asn Lys Lys Thr Gln Ser 1150 Val Ser Met Leu 1230	Val Val Leu Glu Asn 1133 Asp Ser Glu Trp Phe 1215 Phe	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200 Cys Asp
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu 1185 Leu Lys Asn Ala Asp Cys	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu Val Glu Val Glu Val Leu Glu His Ile 120 Asp Leu 1220 Leu Lys	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il 11 Asn Se 1190 Ser Le 5 Ala Se	S Glu 108 J Leu 55 T Cys Thr Thr Leu 116 Glu 75 T Glu Leu C Glu	1065 Gln 0 Gln Glu Glu Arg 1145 Gly 0 Glu Glu Glu Lys 1225 Lys	Glu Asp Pro 1130 Arg Ser Ser Thr Glu 1210 Lys	Glu Val Arg Glu 1119 Phe His Thr Glu Arg Glu Gln Gln	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Thr Leu Glu	Glu 1085 Gln Ala Gln Leu Thr 1165 Ser ) Glu Met Leu Arg	1070 Asn Lys Thr Gln Ser 1150 Val Ser Met Leu 1230 Ile	Val Val Leu Glu Asn 1133 Asp Ser Glu Trp Phe 1215 Phe	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200 Cys Asp
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu 1185 Leu Lys Asn Ala Asp Cys Val Ser Val	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu Val Glu Val Glu Val Leu Glu His Ile 120 Asp Leu 1220 Leu Lys	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il Asn Se 1190 Ser Le 5 Ala Se Lys Ly	S Glu 108 3 Leu 95 7 Cys 1 Thr L Thr 116 6 Glu 75 7 Glu 1 Leu 7 Glu 1 Leu 1 124	1065 Gln 0 Gln Glu Arg 1145 Gly 0 Glu Glu Gln Lys 1225 Lys	Glu Asp Pro 1133 Arg Ser Ser Thr Lys Ile	Glu Val Arg Glu 1119 Phe His Thr Glu Arg Gln Gln Leu	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Leu Glu Glu	Glu 1085 Gln Ala Gln Leu Thr 1165 Ser Glu Met Leu Arg 1245	1070 Asn Lys Lys Thr Gln Ser Val Ser Met Leu 1230 Ile	Val Val Leu Glu Asn 1133 Asp Ser Glu Trp Phe 1215 Phe	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200 Cys Asp Glu
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu 1185 Leu Lys Asn Ala Asp Cys Val Ser Val 1235 Ala Ser Pro	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu Val Glu Val Glu Val Leu Glu His Ile 120 Asp Leu 1220 Leu Lys	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il 11 Asn Se 1190 Ser Le 5 Ala Se Lys Ly Lys Le	S Glu 108 5 Leu 5 Cys 1 Thr 1 Thr 2 Leu 116 6 Glu 1 Leu 1 Clu 1 Leu 1 Leu 1 Leu 1 Leu 1 Leu 1 Leu	1065 Gln 0 Gln Glu Arg 1145 Gly 0 Glu Glu Gln Lys 1225 Lys	Glu Asp Pro 1133 Arg Ser Ser Thr Lys Ile	Glu Val Arg Glu 1119 Phe His Thr Glu Arg Gln Gln Leu	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Cheu Glu Glu Val	Glu 1085 Gln Ala Gln Leu Thr 1165 Ser Glu Met Leu Arg 1245 Ser	1070 Asn Lys Lys Thr Gln Ser Val Ser Met Leu 1230 Ile	Val Val Leu Glu Asn 1133 Asp Ser Glu Trp Phe 1215 Phe	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200 Cys Asp Glu
Leu Ser Leu 1075 Met Ala Thr 1090 Pro Gly Leu 1105 Phe Gly Asn Thr Lys Gln Glu Asp Asp 1155 Gln Arg Gln 1170 Phe Ser Glu 1185 Leu Lys Asn Ala Asp Cys Val Ser Val	Lys Gly 1060 Gln Arg Glu Ile Val Met Thr Ala 112 Val Glu Val Glu Val Glu Val Leu Glu His Ile 120 Asp Leu 1220 Leu Lys Arg Tyr	Glu Gl Ala Hi Ser Ar 10 Ser Se 1110 Glu Gl 5 Gly Va Arg As Lys Il Asn Se 1190 Ser Le 5 Ala Se Lys Ly Lys Le 12	S Glu 108 S Leu 55 Thr L Thr L Thr C Leu 116 C Glu Leu C Glu Leu 124 Leu 155	1065 Gln O Glu Arg 1145 Gly O Glu Glu Glu Lys 1225 Lys	Glu Asp Pro 1133 Arg Ser Ser Thr Lys Ile Glu	Glu Val Arg Glu 1119 Phe His Thr Glu Arg 1199 Gln Gln Leu Asp	Lys Leu 1100 Pro Leu Val Gly Ala 1180 Clu Glu Val 1260	Glu 1085 Gln Ala Gln Leu Thr 1165 Ser Glu Met Leu Arg 1245 Ser	1070 Asn Lys Thr Gln Ser 1150 Val Ser Met Leu 1230 Ile Arg	Val Val Leu Glu Asn 1133 Asp Ser Glu Trp Phe 1215 Phe Glu Glu	Leu Lys Glu Phe 1120 Arg Leu Val Gly Glu 1200 Cys Asp Glu Asn

1265	1270		1275	1280
Ala Leu Glu Asn Asn		eu Thr Ala		Arg Leu Gln
128	5	129	D	1295
Asp Glu Leu Lys Lys	Met Glu G	lu Val Thr	Glu Thr Phe	Leu Ser Leu
1300		1305		1310
Glu Lys Ser Tyr Asp	Glu Val Ly	ys Ile Glu	Asn Glu Glu	Leu Asn Val
1315		1320	1325	
Leu Val Leu Arg Leu	Gln Gly Ly	ys Ile Glu	Lys Leu Xaa	Thr Arg Ala
1330	1335		1340	
Trp Ser Ser Gly Val	Thr Ala A	la Tyr Gly	Lys Xaa Ser	Leu Glu Asn
1345	1350		1355	1360
Leu Glu Ile Glu Pro	Asp Gly A	an Ile Leu	Gln Leu Asn	
136		137		1375
Glu Glu Cys Val Pro	Arg Val A		His His Val	
1380		1385		1390
Cys Lys Gln Glu Asn				
1395		1400	1405	
Lys Val Lys Ala His		la Trp Leu	1420	iie Gin ini
1410 His Gln Glu Arg Pro	1415	na san Cin		Clu Clu Asn
	Arg val G. 1430	oin asn Gin	1435	1440
1425 Thr Thr Leu Leu Gly		on Ire Wie		
inf inf heu heu Gry		145° 145°		1455
Ile Ala Glu Leu Glu				
1460	Dea Gra D	1465	200 02 02	1470
Lys Leu Lys Glu Arg	Val Pro I		Lys Gln Lys	
1475		480	1485	
Ser Pro Gly Lys Lys	Glu Glu G	ilu Leu Lys	Ala Met Met	His Asp Leu
1490	1495		Ala Met Met 1500	
1490	1495		1500	
1490 Gln Ile Pro Cys Ser 1505	1495 Glu Met G 1510	Gln Gln Lys	1500 Val Glu Leu 1515	Leu Lys Tyr 1520
1490 Gln Ile Pro Cys Ser	1495 Glu Met G 1510	Gln Gln Lys	1500 Val Glu Leu 1515	Leu Lys Tyr 1520 Asn Glu Ile
1490 Gln Ile Pro Cys Ser 1505 Glu Ser Glu Lys Leu 1529	1495 Glu Met G 1510 Gln Gln G	Gln Gln Lys Glu Asn Ser 153	1500 Val Glu Leu 1515 Ile Leu Arg 0	Leu Lys Tyr 1520 Asn Glu Ile 1535
1490 Gln Ile Pro Cys Ser 1505 Glu Ser Glu Lys Leu	1495 Glu Met G 1510 Gln Gln G	Gln Gln Lys Glu Asn Ser 153 Ger Ile Ser	1500 Val Glu Leu 1515 Ile Leu Arg 0	Leu Lys Tyr 1520 Asn Glu Ile 1535 Leu Gly Thr
1490 Gln Ile Pro Cys Ser 1505 Glu Ser Glu Lys Leu 1529 Thr Thr Leu Asn Glu 1540	1495 Glu Met G 1510 Gln Gln G Glu Asp S	Gln Gln Lys Glu Asn Ser 153 Ger Ile Ser 1545	1500 Val Glu Leu 1515 Ile Leu Arg O Asn Leu Lys	Leu Lys Tyr 1520 Asn Glu Ile 1535 Leu Gly Thr 1550
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Ala Ser Leu Lys	1765		1770		1775
Leu Glu Asp Thr		n Val Asn 1785		Ser Arg 179	
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Val Met Pro Leu	His Lvs Gl		Asn Ser Val		Ser Trp
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	1845		1850		1855
Leu Leu Trp Gln	Glu Asn Gl	u Arg Leu	Gln Thr Met	Val Gln	Asn Thr
186		1869		187	
Lys Ala Glu Leu	Thr His Se	r Arg Glu	Lys Val Arg	Gln Leu	Glu Ser
1875		1880		1885	
Asn Leu Leu Pro 1890	18	95	190	0	
Asn Pro Thr Glu	Gln Glu Ly	s Leu Ser	Leu Lys Arg	Glu Cys	Asp Gln
1905	1910		1915		1920
Phe Gln Lys Glu	1925		1930		1935
Ser Leu Glu Gln	Glu Leu Gl	u Thr Ile	His Leu Glu	Asn Glu	Gly Leu
			5	195	0
194		1945			
Lys Lys Lys Glm	Val Lys Le	u Asp Glu 1960	Gln Leu Met	1965	
Lys Lys Lys Glm	Val Lys Le	u Asp Glu 1960	Gln Leu Met	1965	
Lys Lys Lys Gln 1955 Leu Arg Ser Thr 1970	Val Lys Le Ala Thr Pr	u Asp Glu 1960 o Ser Pro	Gln Leu Met Ser Pro His 198	1965 Ala Trp O	Asp Leu
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Lys Lys Lys Glm 1955  Leu Arg Ser Thr 1970  Gln Leu Leu Gln 1985  Leu Gln Leu Gln Leu Gln Glu Glu 202  Gly Asn Gln Glu	Val Lys Le Ala Thr Pr 19 Gln Gln Al 1990 Arg Gln Le 2005 Leu Glu As 0 Gln Leu Va	eu Asp Glu 1960 TO Ser Pro 175 TA Cys Pro 184 Leu Gln TA Arg Thr 2029 1 Thr Val 2040	Gln Leu Met  Ser Pro His 198  Met Val Pro 1995  Ala Glu Arg 2010  Ser Glu Thr  Met Glu Glu	1965 Ala Trp 0 Arg Glu Ile Asn Asn Thr 203 Arg Met 2045 Gln Glu	Asp Leu  Gln Phe 2000 Gln His 2015 Pro Gln 0 Ile Glu
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Leu Val Glu Thr Ser Gly Ile Ser Ile Tyr Arg Leu Leu Asp Lys Lys
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His Arg Gly Leu Gly Val His Leu Ser Phe Val Arg Ser Val Thr Met
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Asp Lys Trp Lys Asp Ile Glu Leu Glu Lys Met Lys Ala Gly Gly Asn
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Ala Lys Phe Arg Glu Phe Leu Glu Ser Gln Glu Asp Tyr Asp Pro Cys
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                                105
                                                    110
Asp Lys Val Val Ala Leu Ala Glu Gly Arg Glu Trp Ser Leu Glu Ser
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Tyr Asn Leu Arg Trp Ser Gly Leu Leu Val Thr Val Gly Glu Val Leu
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Glu Lys Ser Leu Leu Asn Val Ser Arg Thr Asp Trp His Met Ala Phe
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Gln Asn Gln Gln Asn Gly Gln Arg Val Tyr Thr Ser Met Ser Asp Cys
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Leu Ile Lys Thr Val Arg Ser Glu Gly Tyr Phe Gly Met Tyr Arg Gly
Ala Ala Val Asn Leu Thr Leu Val Thr Pro Glu Lys Ala Ile Lys Leu
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Pro Gly Gly Ser Pro Ser Ala Ser Arg Arg Lys Gly Arg Ala Ser Glu
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Leu Glu Glu Ala Ser Glu Glu Glu Asp Gly Ala Glu Glu Gly Glu Asp
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Mec	Deu	neu	Lys	325	Mec	Vai	V41	Val	330	001		u_j		335	
T 011	7 ~~	17-1	T 011		Dho	Leu	17-1	Ton		λrα	Va l	Cve	λτα		Lve
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гуѕ	ASP		Pne	Leu	GIY	PIO		Leu	гЛЯ	GIII	Mec	365	116	1111	1 7 1
		355			<b>.</b>	σĿ	360	D	<b>~</b> 3	71.	*		nh-	T1 -	C
Val		Asn	Cys	гÀг	Pne	Thr	ser	Pro	GIY	Ala		PIO	Pne	TIE	ser
	370	_~	_		_	375				- 1 -	380		<b>D</b>	<b>a</b> 1	
	Met	Gln	Trp	Thr		Thr	GIu	Leu	ьеи		ьеи	GIU	Pro	GIA	
385	_			_ •	390	_	_		_	395	<b>.</b>		-1.	••• _	400
Ala	Tyr	Gln	His		Phe	Leu	Tyr	He		Gin	Leu	Ala	He		Leu
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Phe His Ser Ser His Ile Ser Thr Ile Gly Val Asp Phe Lys Met Lys
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                                                45
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Thr Ile Glu Val Asp Gly Ile Lys Val Arg Ile Gln Ile Trp Asp Thr
                        55
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Ala Gly Gln Glu Arg Tyr Gln Thr Ile Thr Lys Gln Tyr Tyr Arg Arg
                    70
                                        75
Ala Gln Gly Ile Phe Leu Val Tyr Asp Ile Ser Ser Glu Arg Ser Tyr
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Gln His Ile Met Lys Trp Val Ser Asp Val Asp Glu Tyr Ala Pro Glu
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Gly Val Gln Lys Ile Leu Ile Gly Asn Lys Ala Asp Glu Glu Gln Lys
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120
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Arg Gln Val Gly Arg Glu Gln Gly Gln Gln Lys Cys Pro Ser Leu Gln
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Leu Ala Lys Glu Tyr Gly Met Asp Phe Tyr Glu Thr Ser Ala Cys Thr
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Asn Leu Asn Ile Lys Glu Ser Phe Thr Arg Leu Thr Glu Leu Val Leu
                                    170
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Gln Ala His Arg Lys Glu Leu Glu Gly Leu Arg Met Arg Ala Ser Asn
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Glu Leu Ala Leu Ala Glu Leu Glu Glu Glu Gly Lys Pro Glu Gly
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Pro Ala Asn Ser Ser Lys Thr Cys Trp Cys
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<210> 2738
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<212> PRT
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## <213> Homo sapiens

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                            25
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                        40
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Lys Tyr Val Ala Asp Val Leu Pro Gly Lys Asn Gln Arg Ala Val Ser
                  55
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Met Ala Ser Ala Ala Arg Glu Leu Val Ile Gln Arg Leu Ser Leu Val
                70
                                  75
Arg Ser Leu Cys Glu Ser Glu Glu Gln Arg Leu Leu Glu Gln Val His
                               90
             85
Gly Glu Glu Glu Arg Ala His Gln Ser Ile Leu Thr Gln Arg Val His
                            105
                                              110
Trp Ala Glu Ala Leu Gln Lys Leu Asp Thr Ile Arg Thr Gly Leu Val
                        120
                                            125
Gly Met Leu Thr His Leu Asp Asp Leu Gln Leu Ile Gln Lys Glu Gln
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                               140
Glu Ile Phe Glu Arg Thr Glu Glu Ala Glu Gly Ile Leu Asp Pro Gln
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Glu Ser Glu Met Leu Asn Phe Asn Glu Lys Cys Thr Arg Ser Pro Leu
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Leu Thr Gln Leu Trp Ala Thr Ala Val Leu Gly Ser Leu Ser Gly Thr
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         180
Glu Asp Ile Arg Ile Asp Glu Arg Thr Val Ser Pro Phe Leu Gln Leu
                                  205
      195
                        200
Ser Asp Asp Arg Lys Thr Leu Thr Ser Ala Pro Arg Ser Gln Arg Cys
                    215
                                       220
Ala Asp Gly Pro Glu Arg Phe Asp His Trp Pro Asn Ala Leu Ala Ala
                                    235
                 230
Thr Ser Phe Gln Asn Gly Leu His Ala Trp Met Val Asn Val Gln Asn
                                250
Ser Cys Ala Tyr Lys Val Gly Val Ala Ser Gly His Leu Pro Arg Lys
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Gly Ser Gly Ser Asp Cys Arg Leu Gly His Asn Ala Phe Ser Trp Val
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Phe Ser Arg Tyr Asp Gln Glu Phe Arg Phe Ser
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<212> DNA

<213> Homo sapiens

<400> 2739

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ttcatcttcg gettetgetg getgagtece gegetgeagg atctgeaage caeggaggee 180

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aggacatetg ggteteattt gettetgeta ggttaaaett ttaettgaca acaaggatte
1140
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gacgtcctgc ttggaaaatg aatagtatac tggtaactca gtctccagtc acctctgtgt
1260
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а
1501
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                               25
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Ile Ile Ser Gly Val Val Ser Leu Phe Ile Phe Gly Phe Cys Trp Leu
                            40
       35
Ser Pro Ala Leu Gln Asp Leu Gln Ala Thr Glu Ala Asn Cys Thr Val
                       55
                                           60
Leu Ser Val Gln Gln Ile Gly Glu Val Phe Glu Cys Thr Phe Thr Cys
                   70
Gly Ala Asp Cys Arg Gly Thr Ser Gln Tyr Pro Cys Val Gln Val Tyr
                                   90
Val Asn Asn Ser Glu Ser Asn Ser Arg Ala Leu Leu His Ser Asp Glu
                               1.05
           100
His Gln Leu Leu Thr Asn Pro Lys Cys Ser Tyr Ile Pro Pro Cys Lys
                                               125
                            120
Arg Glu Asn Gln Lys Asn Leu Glu Ser Val Met Asn Trp Gln Gln Tyr
                                            140
                       135
Trp Lys Asp Glu Ile Gly Ser Gln Pro Phe Thr Cys Tyr Phe Asn Gln
                   150
                                        155
His Gln Arg Pro Asp Asp Val Leu Leu His Arg Thr His Asp Glu Ile
                                   170
               165
Val Leu Leu His Cys Phe Leu Trp Pro Leu Val Thr Phe Val Val Gly
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                                                   190
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gagegetget etgtgeetta eteetgttge ttgeetaete etgaceagge agtgateaae
actatgtgtg gecaaggtat geaggeettt gaetaettgg aagetageaa agteatetae
accaatggct gtattgacaa gttggtcaac tggatacaca gcaacctatt cttacttggt
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cqaacaqcaq tqqqtqctga aagcagcacc aaatggagat ttggattcca gcccccagt
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gataccetta agtgtttggg tttatgtttt cagttttgtt tgggaaacag cagttgcaca
gagagttggg ggtactgctg ctgccttttc accgaggcac tgccaccacc agctctagca
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gtagtcagag tgagctacat cctgccccgc cttcatttcc atggaaacat ggcagctagg
1140
acacqqqqta tacaacagca gccaaattct tccccacctc ccttacttcg aaaaaaagtt
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Tyr Arg Asp Asp Leu Asp Leu Gln Asn Leu Ile Asp Phe Gly Gln Lys
                                                    30
           20
                                25
Lys Phe Ser Cys Cys Gly Gly Ile Ser Tyr Lys Asp Trp Ser Gln Asn
                            40
                                                45
Met Tyr Phe Asn Cys Ser Glu Asp Asn Pro Ser Arg Glu Arg Cys Ser
    50
                                            60
Val Pro Tyr Ser Cys Cys Leu Pro Thr Pro Asp Gln Ala Val Ile Asn
                   70
                                        75
Thr Met Cys Gly Gln Gly Met Gln Ala Phe Asp Tyr Leu Glu Ala Ser
Lys Val Ile Tyr Thr Asn Gly Cys Ile Asp Lys Leu Val Asn Trp Ile
                                105
           100
His Ser Asn Leu Phe Leu Leu Gly Gly Val Ala Leu Gly Leu Ala Ile
                            120
                                                125
Pro Gln Leu Val Gly Ile Leu Leu Ser Gln Ile Leu Val Asn Gln Ile
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135
Lys Asp Gln Ile Lys Leu Gln Leu Tyr Asn Gln Gln His Arg Ala Asp
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Pro Trp Tyr
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gacteeggtg tecagtetee geeeggagee tecagagaet ggagtgteee ateteegeee
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acageeteee aagaeteagg tgteeagtet ceacetggag cetecagaga etggagtgte
ccatctccgc ccagagccta ccaagactga ggtgtccagt ctccacctgg agcctcccga
gactggagtg gcccatctct acctggagcc tcctgggact ggagtgtctc atctctgccc
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384
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<211> 69
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                                25
Asp Trp Ser Val Pro Ser Pro Pro Thr Ala Ser Gln Asp Ser Gly Val
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Gln Ser Pro Pro Gly Ala Ser Arg Asp Trp Ser Val Pro Ser Pro Pro
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Arg Ala Tyr Gln Asp
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<210> 2745
<211> 769
<212> DNA
<213> Homo sapiens
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120
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agtatcacct gagaaaatta ggcattcccg tcttggaaac acgtctctgt gagtttgcat
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                                25
                                                    30
Ser Gly Glu Lys Leu Pro Asp Gln Pro Phe Thr His His Ser Gln Glu
        35
                            40
Gly Pro Phe Pro Pro Gly Arg Glu Thr Ser Arg Pro Ala Pro His Thr
Thr Ala Lys Arg Gly Leu Ser His Leu Glu Arg Asn Phe Gln Thr Ser
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Pro Ser His His Ser Gln Glu Gly Pro Phe Pro Pro Gly Glu Lys Leu
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<212> DNA
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120
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aggeceegg caggitegee caagggeige tiegetigeg tgtecaagee ceetgeeetg
caggeteegg eggeeetge ecetgageee teggeetete eceegatgge geeeacaetg
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ttccccatgg agtccaagag cagcaagacc gacagcgtgc gggctgccgg cgcgcccct
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           20
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Trp Thr Gly Ala Phe Trp Ile Pro Arg Pro Pro Ala Gly Ser Pro Lys
                            40
Gly Cys Phe Ala Cys Val Ser Lys Pro Pro Ala Leu Gln Ala Pro Ala
Ala Pro Ala Pro Glu Pro Ser Ala Ser Pro Pro Met Ala Pro Thr Leu
                    70
Phe Pro Met Glu Ser Lys Ser Ser Lys Thr Asp Ser Val Arg Ala Ala
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                                    90
Gly Ala Pro Pro Ala Cys Lys His Leu Ala Glu Lys Lys Thr Met Thr
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100
                                105
Asn Pro Thr Thr Val Ile Glu Val Tyr Pro Asp Thr Thr Glu Val Asn
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        115
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Asp Tyr Tyr Leu Trp Ser Ile Phe Asn Phe Val Tyr Leu Asn Phe Cys
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                                             140
    130
Cys Leu Gly Phe Ile Ala Leu Ala Tyr Ser Leu Lys Val Arg Asp Lys
                    150
                                        155
Lys Leu Leu Asn Asp Leu Asn Gly Ala Val Glu Asp Ala Lys Thr Ala
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Arg Leu Phe Asn Ile Thr Ser Ser Ala Leu Ala Ala Ser Cys Ile Ile
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Leu Val Phe Ile Phe Leu Arg Tyr Pro Leu Thr Asp Tyr
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1020
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Arg Gln Gln Ala Pro Gly Pro Gln Gln Ala Pro Gly Pro Arg Gln Pro
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Pro Asp Lys Thr Trp Val Lys Lys Gly Glu Pro Leu Pro Val Lys Leu
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Asn Ser Ser Thr Glu Ala Asn Val Ile Lys Glu Ala Leu Asp Ser Ser
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Lys Ser Glu Val Gln Leu Trp Leu Leu Lys Arg Ile Gln Val Pro Ile
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His Thr Ala Ala Met Val Gln Gln Tyr Gly Lys Arg Arg Lys Gln Pro
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Gln Gly Phe Val Val Val Glu Lys Glu Glu Leu Asn Met Ile Asp Asn
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                                         220
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Lys Pro Leu Asn Arg Trp Ala Arg Pro Phe Pro Ala Arg Val Gln Gly
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Tyr Pro Trp Arg Leu Ala Tyr Ser Thr Leu Glu His Gly Thr Ser Leu
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Val Ile Lys
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1140	ggtctgaatc				
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1260	ggcaatgatg				
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totgttcagg gcctctgacc ttctttctgc ccccaaccac tggcccagaa gctactgacc cagcaggggg tgggacgtac tccatccctg ggtctatgac tccatcgcct tccatctcat cgtcatcatg aaacaagget tgtgggggca tcacatctgg aatcagatct <210> 2764 <211> 423 <212> PRT <213> Homo sapiens <400> 2764 Met Pro Pro Gln Ala Leu Phe His Asp Asp Glu Met Glu Gly Asp 5 10 Gly Val Ile Asp Pro Gly Met Glu Tyr Val Pro Pro Pro Ala Gly Ser 25 20 Val Ala Ser Gly Pro Val Val Gly Gly Arg Lys Lys Val Arg Gly Pro 40 45 Glu Gln Ile Lys Gln Glu Val Glu Ser Glu Glu Glu Lys Pro Asp Arg 55 Met Asp Ile Asp Ser Glu Asp Thr Asp Ser Asn Thr Ser Leu Gln Thr 70 Arg Ala Arg Glu Lys Arg Lys Pro Gln Leu Glu Lys Asp Thr Lys Pro 90 85 Lys Glu Pro Arg Tyr Thr Pro Val Ser Ile Tyr Glu Glu Lys Leu Leu 105 110 100 Leu Lys Arg Leu Glu Ala Cys Pro Gly Ala Val Ala Met Thr Pro Glu 120 115 Ala Arg Arg Leu Lys Arg Lys Leu Ile Val Arg Gln Ala Lys Arg Asp 135 Arg Gly Leu Pro Leu Phe Asp Leu Asp Gln Val Val Asn Ala Ala Leu 155 Leu Leu Val Asp Gly Ile Tyr Gly Ala Lys Glu Gly Gly Ile Ser Arg 165 170 Leu Pro Ala Gly Gln Ala Thr Tyr Arg Thr Thr Cys Gln Asp Phe Arg 185 190 Ile Leu Asp Arg Tyr Gln Thr Ser Leu Pro Ser Arg Lys Gly Phe Arg 200 195 His Gln Thr Thr Lys Phe Leu Tyr Arg Leu Val Gly Ser Glu Asp Met 220 215 Ala Val Asp Gln Ser Ile Val Ser Pro Tyr Thr Ser Arg Ile Leu Lys 230 235 Pro Tyr Ile Arg Arg Asp Tyr Glu Thr Lys Pro Pro Lys Leu Gln Leu 250 245 Leu Ser Gln Ile Arg Ser His Leu His Arg Ser Asp Pro His Trp Thr 265 260 Pro Glu Pro Asp Ala Pro Leu Asp Tyr Cys Tyr Val Arg Pro Asn His 280 285 Ile Pro Thr Ile Asn Ser Met Cys Gln Glu Phe Phe Trp Pro Gly Ile 295 300 Asp Leu Ser Glu Cys Leu Gln Tyr Pro Asp Phe Ser Val Val Leu 310 315 Tyr Lys Lys Val Ile Ile Ala Phe Gly Phe Met Val Pro Asp Val Lys

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325
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Tyr Asn Glu Ala Tyr Ile Ser Phe Leu Phe Val His Pro Glu Trp Arg
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Arg Ala Gly Ile Ala Thr Phe Met Ile Tyr His Leu Ile Gln Thr Cys
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Met Gly Lys Asp Val Thr Leu His Val Ser Ala Ser Asn Pro Ala Met
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                                          380
Leu Leu Tyr Gln Lys Phe Gly Phe Lys Thr Glu Glu Tyr Val Leu Asp
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Ala Arg Ser Leu Cys Ser Ala Gly Thr Gln Pro Ala Pro Ser Thr Thr
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Ser Leu Pro Ser Trp Arg Ser Ala Ala Pro Leu Ala Trp Pro Leu Gln
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Leu Ser Gly Gln Trp Trp Ser Ala Gly Ala Cys Phe Leu Asp Leu Pro
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Ser Leu Ala Gln Pro Asp Arg Arg Tyr Ser Glu Pro Ser Met Pro Ser
    35 40
                            45
Ser Gln Glu Cys Leu Glu Ser Arg Val Thr Asn Gln Thr Leu Thr Lys
 50 55 60
Ser Glu Gly Asp Phe Pro Val Pro Arg Val Gly Ser Arg Leu Glu Ser
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              70
Glu Glu Ala Glu Asp Pro Phe Pro Glu Glu Val Phe Pro Ala Val Gln
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Gly Lys Thr Lys Arg Pro Val Asp Leu Lys Ile Lys Asn Leu Ala Pro
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                       105
Gly Ser Val Leu Pro Arg Ala Leu Val Leu Lys Ala Phe Ser Ser Ser
   115 120
                            125
Ser Leu Asp Ala Ser Ser Asp Ser Pro Val Ala Ser Pro Ser Ser
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Pro Lys Arg Asn Phe Phe Ser Arg His Gln Ser Phe Thr Thr Lys Thr
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145 150
Glu Lys Gly Lys Pro Ser Arg Glu Ile Lys Lys His Ser Met Ser Phe
           165 170 175
Thr Phe Ala Pro His Lys Lys Val Leu Thr Lys Asn Leu Ser Ala Gly
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Ser Gly Lys Ser Gln Asp Phe Thr Arg Asp His Val Pro Arg Gly Val
  195 200
                                   205
Arg Lys Glu Ser Gln Leu Ala Gly Arg Ile Val Gln Glu Asn Gly Cys.
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                                220
Glu Thr His Asn Gln Thr Ala Arg Gly Phe Cys Leu Arg Pro His Ala
225 230 235
Leu Ser Val Asp Asp Val Phe Gln Gly Ala Asp Trp Glu Arg Pro Gly
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Ser Pro Pro Ser Tyr Glu Glu Ala Met Gln Gly Pro Ala Ala Arg Leu
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2006

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Asn Arg Ile Arg Val Arg Gln Asp Leu Ala Ser Leu Pro Ala Glu Leu
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40
Ile Asn Gln Ile Gly Asn Arg Cys His Pro Lys Leu Tyr Asp Glu Gly
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Asp Pro Ser Glu Lys Leu Glu Leu Val Thr Gly Thr Asn Val Tyr Ile
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Thr Arg Ala Gln Leu Met Asn Cys His Val Ser Ala Gly Thr Arg His
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Lys Val Leu Leu Arg Arg Leu Leu Ala Ser Phe Phe Asp Arg Asn Thr
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Leu Ala Asn Ser Cys Gly Thr Gly Ile Arg Ser Ser Thr Asn Asp Pro
                           120
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Arg Arg Lys Pro Leu Asp Ser Arg Val Leu His Ala Val Lys Tyr Tyr
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                                            140
Cys Gln Asn Phe Ala Pro Asn Phe Lys Glu Ser Glu Met Asn Ala Ile
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Ala Ala Asp Met Cys Thr Asn Ala Arg Arg Val Val Arg Lys Ser Trp
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Met Pro Lys Val Lys Val Leu Lys Ala Glu Asp Asp Ala Tyr Thr Thr
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Phe Ile Ser Glu Thr Gly Lys Ile Glu Pro Asp Met Met Gly Val Glu
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His Gly Phe Glu Thr Ala Ser His Glu Gly Glu Ala Gly Pro Ile Ala
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Thr Thr Leu Gly Thr Leu Arg Lys Phe Pro Gly Ser Lys Leu Ala Glu
Met Phe Ser Ser Leu Ala Lys Ala Ser Thr Asp Ala Glu Gly Arg Phe
Phe Ile Asp Arg Pro Ser Thr Tyr Phe Arg Pro Ile Leu Asp Tyr Leu
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Arg Thr Gly Gln Val Pro Thr Gln His Ile Pro Glu Val Tyr Arg Glu
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Ala Gln Phe Tyr Glu Ile Lys Pro Leu Val Lys Leu Leu Glu Asp Met
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                                           140
Val Pro Gly Tyr Ser Glu Asn Leu Glu Leu Met Val Arg Leu Ala Arg
                   150
                                       155
Ala Glu Ala Ile Thr Ala Arg Lys Ser Ser Val Leu Val Cys Leu Val
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Glu Thr Glu Glu Gln Asp Ala Tyr Tyr Ser Glu Val Leu Cys Phe Leu
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Gln Asp Lys Lys Met Phe Lys Ser Val Val Lys Phe Gly Pro Trp Lys
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Ala Val Leu Asp Asn Ser Asp Leu Met His Cys Leu Glu Met Asp Ile
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Lys Ala Gln Gly Tyr Lys Val Phe Ser Lys Phe Tyr Leu Thr Tyr Pro
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                                                    30
Glu Asp Ala Glu Glu Ser Leu Glu Glu Glu Glu Ala Leu Asp Pro Leu
                            40
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C1	N w	т1 о		Tla	Dro	Thr	C1		7 ~~	car	Λ1 =	λen		uic	בות
GIU	ALG	595	GIY	116	PIO	1111	600	FIO	лэр	Jer	AIG	605	JCI	1113	AI.
ui.c	Dro		- ז מ	Un l	17-1	Ile		Mot	Wa l	Nen	Dro		Thr	Tur	70 T =
uis	610	PIO	AIA	vaı	vai	615	T y L	Mec	Val	nsp	620	rne	1111	1 y L	ALG
23.2		C1	A 0-20	c^~	The	Ser	Clv	Λcn	Dha	Trn		Len	Sar	T.011	Mot
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	Cuc	Tree	The	C111		Leu	Acn	n en	T AN		Glu	ніс	Mot	Ara	
Arg	Cys	TAT	IIII	645	MEC	neu	мэр	ASII	650	FIC	GIU	1113	1100	655	ASII
cor	Dho	Tla	T ou		т1 о	Val	Dro	Care		Тиг	Mat	Lan	Gln		Mer
261	File	116	660	GIII	116	vai	FIO	665	GIII	1 y L	1-10-0	пси	670	1111	. TE C
1	ħ c m	C1		17-1	Dho	Tyr	Tla		Tvr	T AV	Lare	Sor		בות	Dho
Lys	АБР	675	GIII	vai	PHE	TYL	680	GIII	LYL	Den	шуз	685	Mec	ALG	FIIC
٠	17-1		Cva	C1-	Cvc	Arg		Dro	T and	Dro	Thr		т1ь	Uic	Tla
Ser	690	ıyı	cys	GIII	Cys	695	Arg	PIU	Den	FIU	700	GIII	116	1113	116
* * * * *		T 011	The	~1	Dha	Gly	D~0	71-	212	C . ~		Clu	Mot	The	LOU
	ser	Leu	III	Gry		GIY	PIO	MId	Ala	715	TIG	GIU	ייוכנ	1111	720
705	2	Dua	~1	7	710	Ser	Dwa	T1.	c1 n		T1 134	c ~ ~	Dvo	Dro	
Lys	ASI	PIO	GIU		PTO	Ser	PIO	TIE	730	neu	TAT	ser	PIO	735	PIIE
T1.	T 4	71.	Dwa	725	1	Asp		c1-		C1	T 011	G114	Cl.		Dho
ire	rea	Ald			pås	ASp	Lys		1111	GIU	Leu	GLY		1111	FIIE
61.			740		•	m		745	<b>.</b>	nh -	17- 7	<b>~1</b>	750	C	T 0
GIY						TUT	Asn	vai	Leu	hue	Val	GIA	TÅE	cys	Leu
	Glu		ser	GIU	ьуѕ	- 1 -						200			
_		755			-	-	760		_	_	m	765	•		<b>a1</b> · ·
Ser	His	755			-	Leu	760	Ala	Ser	Cys			Leu	His	Gly
	His 770	755 Asp	Gln	Arg	Trp	Leu 775	760 Leu			_	780	Asp			-
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C1	T1.	195		T	3	Dha			C1	C	C1		Dha	Leu	Dha
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C1			3	<b>~</b>			w.	C	3	X		c1	T	<b>3</b>	<b>6</b> 1
		ser	ASII	Ser			nis	cys	Arg			GIY	Lys	Asn	
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Pne	Met	vaı	ser		-	Pro	GIA	Сув			Pro	Met	Lys	Pro	Leu
<b>01</b>	<b>T</b> 1 -	<b>T</b>	<b></b>	245			01	D	250			<b>D</b>	•	255	
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D	<b>.</b> 1 -	<b>3</b>	260		nh -	n	C	265		<b>3</b>	*	<b>a</b>	270		m
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vaı	290	ASII	TTE	GIU	inr	_	GIU	GIU	Arg	Arg	300	inr	Pne	Cys	HIŞ
C1.5	-	T 011	C	N am	tro 1	295	7.00	8.00	Dwa	T		A 1 a	C1	17. 1	21-
305		DEG	361	ASII	310	Leu	мэр	Asp	FIG	315	Ser	Ala	GIY	Val	320
		V=1	Tla	Gln		Glu	Dha	N C TO	λνα		ጥኮሎ	Chy	T1.~~	Trp	
1111	FIIC	Val	116	325	Gru	Giu	FILE	АЗР	330		1111	GIY	ryr	335	пр
Cvs	Pro	Thr	Δla		Trn	Glu	Glv	Ser			T.em	Lve	Thr	Leu	Ara
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Tle	Len	Tvr		Glu	Val	Δsn	Glu		Glu	Val	Glu	Va 1		His	Val
	~~~	355	014	014			360	-	0		٠ <b></b>	365			
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Ala Phe Leu Asp Met Val Arg Ser Leu Leu Asp Gly Asn Ile Asp Ser
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Ser Gln Tyr Glu Asp Ser Leu Arg Glu Met Phe Thr Ile His Ala Tyr
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Ile Ala Phe Thr Met Asp Lys Leu Ile Gln Ser Ile Val Arg Gln Leu
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Gln His Ile Val Ser Asp Glu Ile Cys Val Gln Val Thr Asp Leu Tyr

85

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Leu Ala Glu Asn Asn Asn Gly Ala Thr Gly Gly Gln Leu Asn Thr Gln
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Asn Ser Arg Ser Leu Leu Glu Ser Thr Tyr Gln Arg Lys Ala Glu Gln
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Leu Met Ser Asp Glu Asn Cys Phe Lys Leu Met Phe Ile Gln Ser Gln
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Gly Gln Val Gln Leu Thr Ile Glu Leu Leu Asp Thr Glu Glu Glu Asn
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Ser Asp Asp Pro Val Glu Ala Glu Arg Trp Ser Asp Tyr Val Glu Arg
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                                              190
Tyr Met Asn Ser Asp Thr Thr Ser Pro Glu Leu Arg Glu His Leu Ala
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Gln Lys Pro Val Phe Leu Pro Arg Asn Leu Arg Arg Ile Arg Lys Cys
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Gln Arg Gly Arg Glu Gln Gln Glu Lys Glu Gly Lys Glu Gly Asn Ser
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Lys Lys Thr Met Glu Asn Val Asp Ser Leu Asp Lys Leu Glu Cys Arg
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Phe Lys Leu Asn Ser Tyr Lys Met Val Tyr Val Ile Lys Ser Glu Asp
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Tyr Met Tyr Arg Arg Thr Ala Leu Leu Arg Ala His Gln Ser His Glu
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Trp Thr Lys Glu His Val Pro Arg Glu Met Ala Ala Glu Thr Ser Lys
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Trp Leu Met Gly Glu Gly Leu Glu Gly Leu Val Pro Cys Thr Thr Thr
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Ile Leu Asn Val Arg Arg Thr Cys Arg Lys Leu Ala Ala Leu Cys Leu
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Asp Lys Ser Leu Ile His Thr Val Leu Leu Gln Lys Asp Tyr Gln Ala
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Ser Glu Asp Lys Val Arg Gln Leu Val Lys Glu Ile Gly Arg Glu Ile
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                                  90
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Gln Gln Leu Ser Met Ala Gly Cys Tyr Trp Leu Pro Gly Ser Thr Val
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Glu His Val Ala Arg Cys Pro Gln Pro Gly Glu Gly Glu Pro Leu Gly
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2032

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50
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Gly Asp Ser Gly Asn Gln Asp Asp Gly Pro Gln Gln Arg Pro Pro Lys
Pro Gly Gly His His Arg His Pro Pro Pro Pro Pro Phe Gln Asn Gln
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Gln Arg Pro Pro Gln Arg Gly His Arg Gln Leu Ser Leu Pro Arg Phe
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Pro Ala Arg His Pro Gln Glu Gln Pro Leu Trp
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Arg Glu Asp Gly Gln Phe Gln Cys Ile Thr Gly Pro Ala Gln Val Pro
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Met Met Ser Pro Asn Gly Ser Val Pro Pro Ile Tyr Val Pro Pro Gly
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Tyr Ala Pro Gln Val Ile Glu Asp Asn Gly Val Arg Arg Val Val Val
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                                    90
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Val Pro Gln Ala Pro Glu Phe His Pro Gly Ser His Thr Val Leu His
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Arg Ser Pro His Pro Pro Leu Pro Gly Phe Ile Pro Val Pro Thr Met
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                                                125
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Met Pro Pro His His Val Ile Cys Thr His Pro
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Glu Ala Val Ser Asn Ile His Asn Leu Asn Ser Ile Ser Glu Ser Pro
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His Glu Arg Met His Pro Tyr Ile Glu Leu Ala Trp Gly Phe Ser Thr
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Val Leu Gly Ile Leu Leu Phe Leu Ala Glu Val Val Leu Leu Cys Trp
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Ile Lys Phe Leu Pro Val Asp Ala Arg Arg Gln Pro Gly Pro Pro
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Ile Met Val Pro Val Gly Leu Ile Phe Val Val Phe Thr Ile His Phe
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Pro Pro Pro Thr Ile Met Gln Gln Asn Lys Lys Gly Asp Met Thr His
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Glu Leu Val Arg His Phe Leu Ile Glu Thr Gly Pro Arg Gly Val Lys
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Leu Lys Gly Cys Pro Asn Glu Pro Asn Phe Gly Ser Leu Ser Ala Leu
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Val Tyr Gln His Ser Ile Ile Pro Leu Ala Leu Pro Cys Lys Leu Val
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Leu Phe Ile Asn Ser Val Asp Met Glu Ser Leu Thr Gly Pro Gln Ala
                                  170
                                                       175
              165
Ile Ser Lys Ala Thr Ser Glu Thr Leu Ala Ala Asp Pro Thr Pro Ala
                                                    190
           180
                               185
Ala Thr Ile Val His Phe Lys Val Ser Ala Gln Gly Ile Thr Leu Thr
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                           200
Asp Asn Gln Arg Lys Leu Phe Phe Arg Arg His Tyr Pro Leu Asn Thr
                                           220
                       215
Val Thr Phe Cys Asp Leu Asp Pro Gln Glu Arg Lys Trp Met Lys Thr
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                                       235
Glu Gly Gly Ala Pro Ala Lys Leu Phe Gly Phe Val Ala Arg Lys Gln
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                                   250
Gly Ser Thr Thr Asp Asn Ala Cys His Leu Phe Ala Glu Leu Asp Pro
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Asn Gln Pro Ala Ser Ala Ile Val Asn Phe Val Ser Lys Val Met Leu
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Asn Ala Gly Gln Lys Arg
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240
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2040

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Asn Met Glu Ile Cys Asp Ile Ile Asn Glu Thr Glu Glu Gly Pro Lys
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Asp Ala Ile Arg Ala Leu Lys Lys Arg Leu Asn Gly Asn Arg Asn Tyr
                        55
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Arg Glu Val Met Leu Ala Leu Thr Val Leu Glu Thr Cys Val Lys Asn
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Cys Gly His Arq Phe His Ile Leu Val Ala Asn Arg Asp Phe Ile Asp
                85
                                    90
Ser Val Leu Val Lys Ile Ile Ser Pro Lys Asn Asn Pro Pro Thr Ile
           100
                                105
Val Gln Asp Lys Val Leu Ala Leu Ile Gln Ala Trp Ala Asp Ala Phe
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                                                125
Arg Ser Ser Pro Asp Leu Thr Gly Val Val His Ile Tyr Glu Glu Leu
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Lys Arg Lys Gly Val Glu Phe
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Gly Arg His Arg Trp Pro Pro Pro Pro Gly Gly Ala Ala Pro Ala Pro
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Val Arg Gly Met Thr Asp Ser Pro Pro Pro Ala Val Gly Cys Val Leu
       35
                          40
Ser Gly Leu Thr Gly Thr Leu Ser Pro Ser Arg Ser Cys Ser Val Cys
                                          60
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Thr Ser Pro Ser Ser Pro Pro Ala Thr Gly Thr Gly Pro Ala Ala Pro
                   70
                                      75
Thr Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln
               85
                                  90
Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln
           100
                              105
Ser Asp Val Asp Xaa Cys Asn Glu Gly Arg Ser Ala Glu Ala Ala Val
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Gln Gly Gly Pro Ala Gly Gly Glu Ala Ala Ala Gly Thr Gly Pro Thr
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Ala Gln Pro Gly Leu Ala Gly Thr Gly
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                 / 150
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gatototgga atagotacca ggcaaagaaa aaaactatgg atgocaagaa tggccagaca
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           20
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                                               30
Lys Ile Glu Arg Ile Gln Asn Pro Asp Leu Trp Asn Ser Tyr Gln Ala
                          40
                                              45
      35
Lys Lys Lys Thr Met Asp Ala Lys Asn Gly Gln Thr Met Asn Glu Lys
                       55
                                         60
Gln Leu Phe His Gly Thr Asp Ala Gly Ser Val Pro His Val Asn Arg
                                    75
                   70
Asn Gly Phe Asn Arg Ser Tyr Ala Gly Lys Asn Ala Val Ala Tyr Gly
                                  90
Lys Gly Thr Tyr Phe Ala Val Asn Ala Asn Tyr Ser Ala Asn Asp Thr
                              105
          100
Tyr Ser Arg Pro Asp Ala Asn Gly Arg Lys His Val Tyr Tyr Val Arg
                           120
                                               125
Val Leu Thr Gly Ile Tyr Thr His Gly Asn His Ser Leu Ile Val Pro
                                         140
                      135
Pro Ser Lys Asn Pro Gln Asn Pro Thr Asp Leu Tyr Asp Thr Val Thr
                  150
                                      155
Asp Asn Val His His Pro Ser Leu Phe Val Ala Phe Tyr Asp Tyr Gln
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                                  170
Ala Tyr Pro Glu Tyr Leu Ile Thr Phe Arg Lys
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240
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480
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Leu Glu Leu Glu Ser Ser Gln Asp Ile Gln Asp Val Leu Asp Ala Asn
Lys Ser Leu Pro Glu Ser Ser Leu Thr Asp Leu Leu Ser Asp Asn Phe
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60
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Thr Asp Ser Leu Val Ser Phe Ser Ala Glu Ile Leu Ser Arg Thr Leu
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Cys Glu Pro Leu Val Ala Ser Leu Trp Met Lys Leu Gly Asn Thr Gly
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Ala Met Arg Arg Cys Val Lys Leu Thr Val Ala Leu Glu Thr Ala Glu
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Cys Glu Phe Pro Pro His Leu Asp Val Tyr Ile Glu Asp Pro His Leu
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                                  125
Pro Pro Ser Leu Gly Leu Leu Pro Gly Ala Arg Val His Phe Ser Gln
                   135
                                       140
Leu Glu Lys Arg Val Ser Arg Ser His Asn Val Tyr Cys Cys Phe Arg
                          155
         150
Ser Ser Thr Tyr Val Gln Val Leu Ser Phe Pro Pro Glu Thr Thr Ile
            165
                       170
Ser Val Pro Leu Pro His Ile Tyr Leu Ala Glu Leu Leu Gln Gly Gly
          180
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                                              190
Gln Ser Pro Phe Gln Ala Thr Ala Ser Cys His Ile Val Ser Val Phe
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Ser Leu Gln Leu Phe Trp Val Cys Ala Tyr Cys Thr Ser Ile Cys Arg
                     215
                                       220
Gln Gly Lys Cys Thr Arg Leu Gly Ser Thr Cys Pro Thr Gln Thr Ala
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                                 235
Ile Ser Gln Ala Ile Ile Arg Leu Leu Val Glu Asp Gly Thr Ala Glu
           245 250
Ala Val Val Thr Cys Arg Asn His His Val Ala Ala Ala Leu Gly Leu
                            265
Cys Pro Arg Glu Trp Ala Ser Leu Leu Asp Phe Val Gln Val Pro Gly
     275 280
Arg Val Val Leu Gln Phe Ala Gly Pro Gly Ala Gln Leu Glu Ser Ser
                   295
Ala Arg Val Asp Glu Pro Met Thr Met Phe Leu Trp Thr Leu Cys Thr
               310
                                   315
Ser Pro Ser Val Leu Arg Pro Ile Val Leu Ser Phe Glu Leu Glu Arg
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                                330
Lys Pro Ser Lys Ile Val Pro Leu Glu Pro Pro Arg Leu Gln Arg Phe
         340
                           345
Gln Cys Gly Glu Leu Pro Phe Leu Thr His Val Asn Pro Arg Leu Arg
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                                 365
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Ile Leu Ala Ser Ser Cys
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120
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Ala Cys Val Cys Ala Cys Val Arg Leu Cys Val Arg Leu Cys Ala Cys
                            40
                                                45
Val Cys Ala Ser Val Cys Met Cys Ala Arg Ala Xaa Val Cys Val Cys
    50
                        55
Thr Cys Val Xaa Leu Cys Thr Arg Val Cys Val His Ala Cys
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Val Cys Val Cys Ala Arg Ala Cys Thr Ser Pro Pro Glu His Leu Gly
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Phe Gly Thr Arg Trp Phe
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                               25
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40
Gly Pro Arg Val Pro Gly Pro Pro Arg Pro Trp Gly Ala Ala Pro Leu
Arg Pro Arg Pro Gly Glu Gly Asp Pro Val Thr Arg Glu Arg Ser Pro
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                    70
Val Pro Gly Ala Thr Glu Met Pro Pro Pro Arg Pro Lys Val Pro Ala
Pro Pro Gly Pro Thr Gly Arg Ser Pro Arg Ala Ala Val Gly His His
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                                105
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Leu Gly Ser
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1020
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425
            420
Val Ser His Asp Cys Thr Phe Val Gly Arg Lys Val Ile His Thr Cys
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Ile Thr Trp Ser Leu Asp Ala Glu Val Pro Ile His His Thr Cys Pro
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                                            460
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Ile Ala Pro Thr Leu Leu Tyr
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Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr
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Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala
                  70
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Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser
              85
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Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg
                            105
                                               110
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Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly
                         120
                                            125
Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg
                                         140
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Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp
                  150
                                     155
Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys
                                170
              165
Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val
                  185 190
           180
Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp
                                             205
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                          200
Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu
                      215
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Ala Ser Gln Ala Gly Ala Trp Ala Pro Gly Pro Arg Gln Pro Pro Gly
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Ala Leu Leu Pro Ala Ala Arg Pro His Arg Leu Pro Glu Arg Ala Asp
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Phe Leu Pro Gly Gly Ala Ala Gly Val Leu Leu Leu Gln Glu Arg Leu
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          260
                              265
Xaa Asp Cys Pro Ala Pro Gln Ala Gly Leu Ser Pro Ser Arg Arg Pro
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                                            285
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Ala Ala Pro Met Pro Leu Pro Asn Met Leu Gly Val Gln Lys Pro Pro
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Arg Gly Asp
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Leu Arg Gln Glu Leu Asn Thr Arg Phe Leu Val Gln Ser Ala Glu Arg
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                                                    30
Pro Gly Ala Ser Leu Gly Pro Gly Val Leu Leu Arg Ala Glu Phe His
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Gln His Gln His Thr His Gln His Thr His Gln His Thr His Gln His
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Gln His Thr Phe Ala Pro Phe Thr Arg
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240
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420
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qaccqcaqca tcatgcaaag ccagagcctg atgctggagc tgcgagagca ggaccaggtg
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730
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Gly Asp Arg Gly Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly
                               25
Ser Ala Gly Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser
                           40
Met Gly Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser
                                          60
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Val Gly Arg Glu Ala His Ala Gln Gln Pro Leu Leu Pro Asp Val Ile
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65
Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met Phe Thr
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Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe Ser Leu Asn
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                                                   110
           100
Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His Ile Met Lys Asn
                           120
                                               125
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Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val Gly Asp Arg Ser Ile
                       135
                                           140
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Met Gln Ser Gln Ser Leu Met Leu Glu Leu Arg Glu Gln Asp Gln Val
                                      155
         150
Trp Val Arg Leu Tyr Lys Gly Glu Arg Glu Asn Ala Ile Phe Ser Glu
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Glu Leu Asp Thr Tyr Ile Thr Phe Ser Gly Tyr Leu Val Lys His Ala
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Thr Glu Pro
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                           25
Leu Ser Asn Ile Ile Asn Lys Leu Leu Glu Thr Lys Asn Glu Leu His
                                        45
                       40
Lys His Val Glu Phe Asp Phe Leu Ile Lys Gly Gln Phe Leu Arg Met
                                     60
Pro Leu Asp Lys His Met Glu Met Glu Asp Ile Ser Ser Glu Glu Val
                                 75
               70
Val Glu Ile Glu Tyr Val Glu Lys Tyr Thr Ala Pro Gln Pro Glu Gln
                              90
Cys Met Phe His Asp Asp Trp Ile Ser Ser Ile Lys Gly Ala Glu Glu
                          105
        100
Trp Ile Leu Thr Gly Ser Tyr Gly Lys Thr Ser Arg Ile Trp Ser Leu
                              125
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Glu Gly Lys Ser Ile Met Thr Ile Val Gly His Thr Asp Val Val Lys
         135
Asp Val Ala Trp Val Lys Lys Asp Ser Leu Ser Cys Leu Leu Xaa Glu
       150
                      155
Cys Phe Tyr Gly Ser Asp Tyr Ser Leu Met Gly Val Glu Cys Arg Glu
                              170
             165
Lys Gln Ser Glu Ser Pro Thr Leu Leu Xaa Arg Gly His Ala Gly Ser
                185
                                            190
         180
Val Asp Ser Ile Ala Val Asp Gly Ser Gly Thr Lys Phe Cys Ser Gly
                       200
                                         205
      195
Ser Trp Asp Lys Met Leu Lys Ile Trp Ser Thr Val Pro Thr Asp Glu
                            220
  210 215
Glu Asp Glu Met Glu Glu Ser Thr Asn Arg Pro Arg Lys Lys Gln Lys
         230 235
Thr Glu Gln Leu Gly Leu Thr Arg Thr Pro Ile Val Thr Leu Ser Gly
                            250
          245
His Met Glu Ala Val Ser Ser Val Leu Trp Ser Asp Ala Glu Glu Ile
                           265 270
Cys Ser Ala Ser Trp Asp His Thr Ile Arg Val Trp Asp Val Glu Ser
                       280
Gly Ser Leu Lys Ser Thr Leu Thr Gly Asn Lys Val Phe Asn Cys Ile
                   295
                                     300
Ser Tyr Ser Pro Leu Cys Lys Arg Leu Ala Ser Gly Ser Thr Asp Arg
                                 315
               310
His Ile Arg Leu Trp Asp Pro Arg Thr Lys Asp Gly Ser Leu Val Ser
                            330
                                             335
             325
Leu Ser Leu Thr Ser His Thr Gly Trp Val Thr Ser Val Lys Trp Ser
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345
Pro Thr His Glu Gln Gln Leu Ile Ser Gly Ser Leu Asp Asn Ile Val
                           360
        355
Lys Leu Trp Asp Thr Arg Ser Cys Lys Ala Pro Leu Tyr Asp Leu Ala
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                                            380
Ala His Glu Asp Lys Val Leu Ser Val Asp Trp Thr Asp Thr Gly Leu
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                   390
Leu Leu Ser Gly Gly Ala Asp Asn Lys Leu Tyr Ser Tyr Arg Tyr Ser
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Pro Thr Thr Ser His Val Gly Ala
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<212> DNA
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180
cageeggaga agetggeeet gtgtgggeet gggeetgtag ggttteeeag tggetttgeg
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300
atggggacac gcacatgtcc cttggccacg acaaaatggc agtgatgctg cttgccttcc
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<213> Homo sapiens
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Asp Gln Val Pro Ser Ser Ser Leu Ala Pro Gln Ser His Trp Glu Thr
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                                25
                                                    30
Leu Gln Ala Gln Ala His Thr Gly Pro Ala Ser Pro Ala Ala Leu Pro
                                                45
       35
                           40
Lys Gly Asp Ala Cys Asp Cys Val Cys Leu Pro Thr Gly Val Thr Thr
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His Pro Arg Pro Pro Glu Pro Gln His Glu Gly Ser Ala Pro Phe Pro
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                    70
His
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<213> Homo sapiens
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180
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1440
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         20
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Thr Ala Leu Met Glu Ala Cys Met Asp Gly His Val Glu Val Ala Arg
                                          45
                       40
Leu Leu Leu Asp Ser Gly Ala Gln Val Asn Met Pro Ala Asp Ser Phe
                   55
                                      60
Glu Ser Pro Leu Thr Leu Ala Ala Cys Gly Gly His Val Glu Leu Ala
                70
Ala Leu Leu Ile Glu Arg Gly Ala Asn Leu Glu Glu Val Asn Asp Glu
                              90
Gly Tyr Thr Pro Leu Met Glu Ala Ala Arg Glu Gly His Glu Glu Met
                           105
        100
Val Ala Leu Leu Ser Thr Arg Ser Xaa Ile Ser Met His Arg Gln
     115 120
                                125
Lys Lys Leu Lys Lys Leu Leu Leu Thr Leu Ala Cys Cys Gly Gly Phe
  130 135
Leu Glu Val Ala Asp Phe Leu Ile Lys Ala Gly Ala Asp Ile Glu Leu
                150 155
Gly Cys Ser Thr Pro Leu Met Glu Ala Ala Gln Glu Gly His Leu Glu
                               170
            165
Leu Val Lys Tyr Leu Leu Ala Ala Gly Ala Asn Val His Ala Thr Thr
                                             190
                           185
         180
Ala Thr Gly Asp Thr Ala Leu Thr Tyr Ala Cys Glu Asn Gly His Thr
                        200
                                          205
Asp Val Ala Asp Val Leu Leu Gln Ala Gly Ala Asp Leu Asp Lys Gln
                                      220
                   215
Glu Asp Met Lys Thr Ile Leu Glu Gly Ile Asp Pro Ala Lys His Leu
                                235
          230
Glu His Glu Ser Glu Gly Gly Arg Thr Pro Leu Met Lys Ala Ala Arg
                              250
            245
Ala Gly His Val Cys Thr Val Gln Phe Leu Ile Ser Lys Gly Ala Asn
                                             270
                           265
Val Asn Arg Thr Thr Ala Asn Asn Asp His Thr Val Leu Ser Leu Ala
     275
                        280
Cys Ala Gly Gly His Leu Ala Val Val Glu Leu Leu Ala His Gly
                                      300
                    295
Ala Asp Pro Thr His Arg Leu Lys Asp Gly Ser Thr Met Leu Ile Glu
                310
                                   315
Ala Ala Lys Gly Gly His Thr Ser Val Val Cys Tyr Leu Leu Asp Tyr
                              330
             325
Pro Asn Asn Leu Leu Ser Ala Pro Pro Pro Asp Val Thr Gln Leu Thr
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340
                               345
Pro Pro Ser His Asp Leu Asn Arg Ala Pro Arg Val Pro Val Gln Ala
                        360
                                              365
Leu Pro Met Val Val Pro Pro Gln Glu Pro Asp Lys Pro Pro Ala Asn
                      375
                                          380
Val Ala Thr Thr Leu Pro Ile Arg Asn Lys Ala Ala Ser Lys Gln Lys
                  390
                                      395
Ser Ser Ser His Leu Pro Ala Asn Ser Gln Asp Val Gln Gly Tyr Ile
                                 410
             405
Thr Asn Gln Ser Pro Glu Ser Ile Val Glu Glu Ala Gln Gly Lys Leu
                               425
                                                  430
Thr Glu Leu Glu Gln Arg Ile Lys Glu Ala Ile Glu Lys Asn Ala Gln
                          440
                                              445
Leu Gln Ser Leu Glu Leu Ala His Ala Asp Gln Leu Thr Lys Glu Lys
                                           460
                      455
Ile Glu Glu Leu Asn Lys Thr Arg Glu Glu Gln Ile Gln Lys Lys Gln
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                  470
Lys Ile Leu Glu Glu Leu Gln Lys Val Glu Arg Glu Leu Gln Leu Lys
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Thr Gln Gln Leu Lys Lys Gln Tyr Leu
          500
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<212> DNA
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481
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                               25
Leu Tyr Pro Gly Gly Cys Gln Gln Leu Leu His Leu Cys Val Gln Gln
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Pro Leu Gln Leu Gln Val Glu Phe Leu Arg Leu Asn Thr His Glu
Asp Pro Gln Leu Leu Glu Ala Thr Leu Ala Gln Leu Pro Gln Asn Leu
                                        75
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Ser Cys Leu Arg Ser Leu Val Leu Lys Arg Gly Gln Arg Arg Asp Thr
                                    90
                                                        95
Leu Gly Ala Cys Leu Arg Gly Ala Leu Thr Asn Leu Pro Ala Gly Leu
            100
                               105
                                                    110
Ser Gly Leu Ala His Leu Ala His Leu Asp Leu Ser Phe Asn Ser Leu
        115
                            120
                                                125
Glu Thr Leu Pro Ala Cys Val Leu Gln Met Arg Gly Leu Gly Ala Leu
                       135
                                            140
Leu Leu Ser His Asn Cys Leu Ser Glu Leu Pro Glu Ala Leu Gly Ala
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<212> DNA
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Asp Gly Val Ile Thr Asp Met Gly Asp Thr Arg Glu Ala Ile Val His
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Giu	Val	115	JCI	nop	ALG	n.u	120	414				125		5	
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Asn	Val	Phe	Arq	Leu	Thr	Thr	Ser	Asp	Cys	Glu	Cys	Leu	Phe	Gln	Ala
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	<b>.</b>		420		D	T				Luc					Leu
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Tla	uic		Lau	Dro	Glu	His		Tur	Glu	Thr	Len		Phe	I.eu	Ser
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17-1	Tla		7.00	T 011	T1.	C1=		Th∽	Lys	705	715		7. ~~	G1.,	Lau
vai	290	Mec	ASP	reu	116	295	Arg	1111	шys	vab	300	val	ALY	GIU	Dea
N on		T 011	<i>C</i> 1 ~	T	7		Mot	Lvc	Lys	т1 о		Dho	Cln	C1.,	λl.
	ASII	Leu	GIII	ıyı	310	ràs	Mec	гуѕ	гур	315	Leu	Pne	GIII	GIU	
305	8	~1··	D	~1		c1	A 1 -	D==	~1		~1	C1	C1	A 1 -	320
PIO	ASII	GIY	PIO	325	Ald	GIU	Mld	PIO	Glu 330	GIU	GIU	GIU	GIU	335	GIU
Dw0	Th	Ma+	176.0		31-	<b>C1</b>	The se	T 011		Ca=	Tan	~1	co-		uia
PIO	IYL	1,16 C	340	ALG	MIG	GIA	1111	345	Thr	Ser	neu	GIU	350	261	птэ
50×	1701	0-0		Mot	602	T10	ca=		Ser	Ca*	Gln	CA*		Car	Val
261	val	355	Ser	Met	361	TIG	360	на	261	361	GIII	365	361	261	val
) cn	602		- נמ	7.00	λ T -	802		A c n	Glu	Gliv	Glu		Glu	Glu	Cli
Mail	370	neu	ALA	nsp	ALA	375	АЗР	A3II	GIU	GIU	380	GIU	Giu	Gru	GIU
Glu		Glu	Glu	Glu	Glu		Glu	Glv	Pro	Glu		Ara	Glu	Met	Δla
385	GIU	GIU	Giu	GIU	390	Gru	GIU	GLY	110	395	niu	w.a	GIU	1100	400
	Met	Gln	Glu	Glv		His	Thr	Val	Thr		His	Ser	Ser	Tle	
		٠	014	405	010				410	001				415	
His	Ara	ī.eu	Pro		Ser	Asp	Asn	Leu	Tyr	Asp	Asp	Pro	Tvr		Pro
	9		420			ПОР		425	- / -				430		
Glu	Tle	Thr		Ser	Pro	Leu	Gln		Pro	Ala	Ala	Pro		Pro	Thr
		435					440					445			
Ser	Thr		Ser	Ser	Ala	Arg		Arq	Ala	Tyr	Cys	Arg	Asn	Arq	Asp
	450					455				•	460	-			
His	Phe	Ala	Thr	Ile	Arq	Thr	Ala	Ser	Leu	Val	Ser	Arg	Gln	Ile	Gln
465					470					475		_			480
Glu	His	Glu	Gln	Asp	Ser	Ala	Leu	Arg	Glu	Gln	Leu	Ser	Gly	Tyr	Lys
				485					490					495	
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Leu	Arg	Gly	Glu	Arg	Glu	Glu	His	Ser	Ala	Arg	Leu	Gln	Arg	Glu	Leu
		515					520					525			
Glu	Ala	Gln	Arg	Ala	Gly		Gly	Ala	Glu	Ala	Glu	Lys	Leu	Ala	Arg
	530					535					540				
_	His	Gln	Ala	Ile	-	Glu	Lys	Glu	Ala	_	Ala	Ala	Gln	Ala	
545					550			_		555		_	_		560
Glu	Arg	Lys	Phe		Gln	His	Ile	Leu	Gly	Gln	Gln	Lys	Lys		Leu
				565		<b>03</b>			570	m	•	•	•	575	<b>~1</b>
Ala	ALA	Leu		GIU	Ala	GIN	rys	_	Thr	Tyr	rys	Leu		ràa	GIU
<b>01</b> -	• • • •	•	580	<b>01</b>	•	~1	<b>61</b>	585	D		m	D	590	<b>3</b>	<b>~1</b>
GIN	Leu	-	GIU	GIU	Leu	GIN		ASN	Pro	ser	inr		гÀг	Arg	GIU
•	. 1 -	595	m		•		600	•	<b>~1</b>	<b>~1</b> -	•	605	~1-	<b>~</b>	<b>~1</b> –
rys		GIU	irp	Leu	Leu	-	GIn	гàг	Glu	GIn		GIR	GIN	Cys	GIN
×1_	610	~1	C1	21-	<b>C</b> 1	615		3	7	C1-	620	<i>-</i> 122	Ma sac	Dho	C1
	GIU	GIU	GIU	AIG	630	ಗ≎n	Leu	HIG.	Arg	635	AT G	GIII	TAT	FIIE	640
625		C	7~~	C1~		T	Ar-	Lvo	Met		1	λls	Ar~	uic	
ne u	Gln				1 V L	7772	ur 9	nys	160	neu.	₽CU	$\alpha$ 1a	~-9	1170	Ser
	Gln	Cys	Arg		-1-	•			650						
וים.		-	_	645	-	-	Glu	Δen	650 Leu	Agn	Lve	Lvs	Gln	655	Gln
Leu		-	Asp	645	-	-	Glu		650 Leu	Asn	Lys	Lys		655	Gln
	Asp	Gln	Asp 660	645 Leu	Leu	Arg		665					670	655 Thr	

												co.			
<b>-2</b>	Leu	675	•		a1 -	T	680	N1-	***	<i>α</i> 1 =	n	685	D ~~~	ת [ ת	Cl.
GIU	ьеи 690	GIU	Leu	Arg	GIN	695	GIN	AIA	vai	GIII	700	IIII	ALY	мта	Giu
ī.eu	Thr	Ara	Leu	Gln	His		Thr	Glu	Leu	Glv		Gln	Leu	Glu	Tvr
705	1111	arg	шец		710	·	••••	014		715					720
	Lys	Arg	Ara	Glu		Glu	Leu	Ara	Gln		His	Ala	Ala	Gln	
	1	5	5	725				3	730	-,-				735	
Arq	Gln	Gln	Pro		Ser	Leu	Lys	Val		Ala	Gly	Gln	Arg	Pro	Pro
5			740	•			•	745	_		•		750		
Gly	Leu	Pro	Leu	Pro	Ile	Pro	Gly	Ala	Leu	Gly	Pro	Pro	Asn	Thr	Gly
-		755					760					765			
Thr	Pro	Ile	Glu	Gln	Gln	Pro	Cys	Ser	Pro	Gly	Gln	Glu	Ala	Val	Leu
	770					775					780				
	Gln	Arg	Met	Leu		Glu	Glu	Glu	Glu		Val	Gly	Glu	Arg	
785					790			_		795	_				800
Ile	Leu	Gly	Lys		GlA	Ala	Thr	Leu		Pro	Lys	Gin	GIN		IIe
•	<b>0</b> 3	<b>61</b>	~1	805	~1	71.	D==	C - =	810	50×	Dro	C1 =	T 1/6	815	Clu
ren	Gly	GIU	820	ser	GIA	Ald	PIO	825	PIO	ser	PIO	GIII	830 Eys	nrs	GIY
Sar	Leu	V= 1		Glu	Glu	Va 1	Trn		Len	Pro	Glu	Glu		Glu	Glu
261	ъса	835	ASP	Gru	oru	•44	840	0.7	DC G			845			0
Leu	Arg		Pro	Ser	Leu	Val		Gln	Glu	Arq	Ser		Val	Gly	Gln
	850					855					860			•	
Glu	Glu	Ala	Gly	Thr	Trp	Ser	Leu	Trp	Gly	Lys	Glu	Asp	Glu	Ser	Leu
865					870					875					880
Leu	Asp	Glu	Glu	Phe	Glu	Leu	Gly	Trp	Val	Gln	Gly	Pro	Ala	Leu	Thr
				885					890					895	
Pro	Val	Pro		Glu	Glu	Glu	Glu		Glu	Glu	Gly	Ala		Ile	Gly
			900			_		905	_		_		910	<b>D</b>	<b>D</b>
Thr	Pro		Asp	Pro	GLY	Asp		Cys	Pro	Ser	Pro		IIe	Pro	Pro
<b>01</b>	Pro	915	B	<b>C</b> h	774 -		920	Dwa	Cura	Dwo	ח ז ה	925	Cln	Ton	D.C.O.
Gru	930	PIO	PLO	1111	UIS	935	Arg	PIO	Cys	FIU	940	Jer	G111	ьси	210
Glv	Leu	Len	Ser	His	Glv		Leu	Ala	Glv	Leu		Phe	Ala	Val	Glv
945	Deu	Deu	001		950				,	955					960
	Ser	Ser	Gly	Leu		Pro	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Pro	Leu
			-	965					970					975	
Leu	Ala	Ala	Gln	Gly	Gly	Gly	Gly	Leu	Gln	Ala	Ala	Leu	Leu	Ala	Leu
			980					985					990		
Glu	Val	-	Leu	Val	Gly	Leu	_		Ser	Tyr	Leu			Cys	Thr
		995				_	1000		_	_	_	1009			
Ala	Leu		Leu	Pro	Ser			Phe	Leu	Leu			GIn	Gly	Thr
	1010			**- 1	<b>7</b>	1015		^	~~~	N	1020	-	t our	Wo.	C1
1029	Leu	GIY				GIÀ								Mec	1040
	Pro	Len												Glv	
Val	PLO	Leu	GLy	104		AIG	niu	111	1050		7124			1055	
Ala	Leu	Pro	Leu			Met	Ala	Ala			Arq	Trp	Val		
			1060					1065		•	_	_	1070		
Gln	Gly	Pro	Arg	Val	Arg	Arg	Gly	Ile	Ser	Arg	Leu	Trp	Leu	Arg	Val
		1075	5				1080	)				1089	5		
Leu	Leu	Arg	Leu	Ser	Pro	Met	Ala	Phe	Arg	Ala	Leu	Gln	Gly	Cys	Gly
	1090			•		1099					1100				
Ala	Val	Gly	Asp	Arg	Gly	Leu	Phe	Ala	Leu	Tyr	Pro	Lys	Thr	Asn	Lys
									•						

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Gln Thr Ile Thr Gly Ser Asp Pro Glu Glu Ala Ile Phe Asp Thr Leu
                                                45
       35
                            40
Cys Thr Asp Asp Ser Ser Glu Glu Ala Lys Thr Leu Thr Met Asp Ile
                                            60
                        55
    50
Leu Thr Leu Ala His Thr Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu
                    70
                                        75
Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
                                    90
                                                        95
                85
Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr
                                                    110
            100
                                105
Pro Ser Arg Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro
                                                125
                            120
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Val Ile Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala
                                            140
                        135
Glu Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
                    150
                                        155
Thr Glu Ile Glu Thr Thr Thr Ser Ser Ile Pro Gly Ala Ser Asp Thr
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170

165

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Asp Leu Ile Pro Thr Glu Gly Val Lys Ala Ser Ser Thr Ser Asp Pro
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          180
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Pro Ala Leu Pro Asp Ser Xaa Leu Lys Gln Asn His Thr Ser Leu Arg
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                                              205
Ser Xaa Ala Ser Ala Glu Thr Leu Ser Thr Ala Gly Thr Thr Glu Ser
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                                         220
Ala Ala Pro Asp Ala Thr Val Gly Thr Pro Leu Pro Thr Asn Ser Thr
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                  230
Ile Glu Arg Glu Val Thr Ala Pro Arg Ala Thr Thr Leu Ser Gly Ala
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Leu Val Thr Val Ser Arg Asn Pro Leu Glu Glu Thr Ser Ala Leu Ser
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                              265
                                                  270
Val Glu Thr Pro Ser Tyr Val Lys Val Ser Gly Ala Ala Pro Val Ser
                           280
                                              285
Ile Glu Ala Gly Ser Ala Val Gly Lys Thr Thr Ser Phe Ala Gly Ser
                                          300
                       295
Ser Ala Ser Ser Tyr Ser Pro Ser Glu Ala Ala Leu Lys Asn Phe Thr
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                                      315
Pro Ser Glu Thr Pro Thr Met Asp Ile Ala Thr Lys Gly Pro Phe Pro
              325
                                  330
Thr Ser Arg Asp Pro Leu Pro Ser Val Pro Pro Thr Thr Asn Ser
           340
                    345
Ser Arg Gly Thr Asn Ser Thr Leu Ala Lys Ile Thr Thr Ser Ala Lys
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Thr Thr Met Lys Pro Pro Thr Ala Thr Pro Thr Thr Ala Arg Thr Arg
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480

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1560
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Pro Glu Cys Ser Val Lys Gly Arg Thr Glu Ser Phe His Cys Pro Pro
        3.5
                                                45
Ala Gln Ser Cys Tyr Pro Val Thr Thr Lys His Glu Cys Ser Asp Lys
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55
Leu Ala Gln Cys Arg Gln Ala Arg Arg Thr Arg Ser Glu Val Thr Leu
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Leu Trp Lys Asn Asn Leu Pro Ile Met Val Glu Met Met Leu Leu Pro
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               85
Asp Cys Cys Tyr Ser Asp Asp Gly Pro Thr Thr Glu Gly Ile Asp Leu
           100
                               105
                                                    110
Asn Asp Pro Ala Ile Lys Gln Asp Ala Leu Leu Leu Glu Arg Trp Ile
                                               125
                           120
        115
Leu Glu Pro Val Pro Arg Gln Asn Gly Asp Arg Phe Ile Glu Glu Lys
                                           140
                       135
Thr Leu Leu Leu Ala Val Arg Ser Phe Val Phe Phe Ser Gln Leu Ser
                                       155
                  150
Ala Trp Leu Ser Val Ser His Gly Ala Ile Pro Arg Asn Ile Leu Tyr
               165
                                   170
Arg Ile Ser Ala Ala Asp Val Asp Leu Gln Trp Asn Phe Ser Gln Thr
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                               185
                                                   190
Pro Ile Glu His Val Phe Pro Val Pro Asn Val Ser His Asn Val Ala
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Gly Ser Gly Ser Ala Ser Ala Leu Asn Ala Ala Gly Thr Gly
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Val Gly Ser Asn Ala Thr Ser Ser Glu Asp Phe Pro Pro Pro Ser Leu
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Leu Gln Pro Pro Pro Pro Ala Ala Ser Ser Thr Ser Gly Pro Gln Pro
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Pro Pro Pro Gln Ser Leu Asn Leu Leu Ser Gln Ala Gln Leu Gln Ala
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Gln Pro Leu Ala Pro Gly Gly Thr Gln Met Lys Lys Lys Ser Gly Phe
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Gln Ile Thr Ser Val Thr Pro Ala Gln Ile Ser Ala Ser Ile Ser Ser
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Ser His Thr Glu Asp Leu Ser Ser Ser Glu Ile Leu Asp Val Ser Leu
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Ser Arg Ala Thr Asp Leu Gly Glu Pro Glu Arg Ser Ser Ser Glu Glu
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                            265
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                 280
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 aatgggaaca agggccctcc agttggctca aggataagca tgccaaccac aaagcctcgt
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 gatgettett egttaacaca agtaacaaag gtgeaceage atteagetgt ecageagaae
 tatgtgtete cattacagge caccateagt aaateecaga eeaaceeegt egtgaagtta
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 Ser Glu Ala Leu Ala Val Ile Asn Asn Gly Asn Lys Gly Pro Pro Val
                             40
 Gly Ser Arg Ile Ser Met Pro Thr Thr Lys Pro Arg Pro Gly Leu Arg
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55

60

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Glu Glu Lys Leu Ala Ser Ile Met Ser Lys Leu Pro Leu Ala Thr Pro
                  70
Lys Lys Leu Asp Ser Thr Gln Thr Thr His Ser Ser Ser Leu Ile Ala
                                  90
Gly His Thr Gly Pro Val Pro Lys Lys Pro Gln Asp Leu Ala His Thr
                                                 110
                             105
           100
Gly Ile Ser Ser Gly Leu Ile Ala Gly Ser Ser Ile Gln Asn Pro Lys
                                             125
                         120
      115
Val Ser Leu Glu Pro Leu Pro Ala Arg Leu Leu Gln Gln Gly Leu Gln
                                         140
                      135
Arg Ser Ser Gln Ile His Thr Ser Ser Ser Gln Thr His Val Ser
                                      155
                 150
Ser Ser Ser Gln Ala Gln Ile Ala Ala Ser Ser His Ala Leu Gly Thr
                                                     175
               165
                                  170
Ser Glu Ala Gln Asp Ala Ser Ser Leu Thr Gln Val Thr Lys Val His
                              185
                                                 190
           180
Gln His Ser Ala Val Gln Gln Asn Tyr Val Ser Pro Leu Gln Ala Thr
                                             205
                          200
Ile Ser Lys Ser Gln Thr Asn Pro Val Val Lys Leu Ser Asn Asn Pro
                                          220
                      215
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Gln Leu Ser Cys Ser Ser Ser Leu Ile Lys Thr Ser Asp Lys Pro Leu
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Met Tyr Arg Leu Pro Leu Ser Thr Pro Phe Thr Arg
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          20
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Ser Gly Arg Ile Val Trp Ser Pro Ala Val Pro Gly Ile Pro Val Arg
                        40
                                             45
Ser Ser Ser Leu Pro Leu Phe Ser Asp Ala Met Pro Ala Pro Thr Gln
                      55
Leu Phe Phe Pro Leu Ile Arg Asn Cys Glu Leu Ser Arg Ile Tyr Gly
                                     75
                  70
Thr Ala Cys Tyr Cys His His Lys His Leu Cys Cys Ser Ser Ser Tyr
                                  90
Ile Pro Gln Ser Arg Leu Arg Tyr Thr Pro His Pro Ala Tyr Ala Thr
          100
                             105
                                              110
Phe Cys Arg Pro Lys Glu Asn Trp Trp Gln Tyr Thr Gln Gly Arg Arg
                         120
Tyr Ala Ser Thr Pro Gln Lys Phe Tyr Leu Thr Pro Pro Gln Val Asn
           135
                                 140
Ser Ile Leu Lys Ala Asn Glu Tyr Ser Phe Lys Val Pro Glu Phe Asp
145
                  150
                                      155
Gly Lys Asn Val Ser Ser Ile Leu Gly Phe Asp Ser Asn Gln Leu Pro
              165
                                 170
Ala Asn Ala Pro Ile Glu Asp Arg Arg Ser Ala Ala Thr Cys Leu Gln
          180 .
                              185
                                                 190
Thr Arg Gly Met Leu Leu Gly Val Phe Asp Gly His Ala Gly Cys Ala
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Cys Ser Gln Ala Val Ser Glu Arg Leu Phe Tyr Tyr Ile Ala Val Ser
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Leu Leu Pro His Glu Thr Leu Leu Glu Ile Glu Asn Ala
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ctgcagtgta aagttttgat atgtgatagc agtgaccacc agtctcgctg caatcaaggt
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Ser Asp His Gln Ser Arg Cys Asn Gln Gly Cys Val Ser Arg Ser Lys
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Arg Asp Ile Ser Ser Tyr Lys Trp Lys Thr Asp Ser Ile Ile Gly Pro
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Ile Arg Leu Lys Arg Asp Arg Ser Ala Ser Gly Asn Ser Gly Phe Gln
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His Glu Thr His Ala Glu Glu Thr Pro Asn Gln Pro Phe Asn Ser Val
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                85
His Leu Phe Ser Phe Met Val Leu Ala Leu Asn Val Val Thr Val Ala
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Thr Ile Thr Val Arg His Phe Val Asn Gln Arg Ala Asp Tyr Lys Tyr
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Gln Lys Leu Gln Asn Tyr
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300
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Lys Gly Glu Glu Leu Ser Ala Ala Ile Lys Arg Ile Val Ala Thr
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Ala Lys Ala Ser Gly Lys Lys Leu Gln Lys Val Thr Leu Lys Val Ser
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Pro Arg Gly Ile Ile Leu His Pro Gly His His Pro Ala Pro Arg Gln
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His Cys Cys His Ser Arg Leu Val Ala Ala Ala Pro Arg Pro Cys Trp
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660
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1920		agcgtccgac			
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PCT/US00/08621 WO 00/58473

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<211> 258
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Ser Lys Arg Phe Lys Thr Met Ser Pro Ser Gln Met Ile Met Pro Asn
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Val Met Glu Met Ile Ala Ala Leu Gly Pro Gly Pro Ser Pro Tyr Pro
Leu Pro Pro Pro Gly Gly Thr Asn Ser Asn Asp Tyr Ser Ser Gln
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                         75
Gly Asn Asn Tyr Gln Gly His Gly Asn Phe Asp Phe Pro His Gly Asn
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Pro Gly Gly Thr Ser Met Asn Asp Phe Met His Gly Pro Pro Gln Leu
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                           105
Ser His Pro Pro Asp Met Pro Asn Asn Met Ala Ala Leu Glu Lys Pro
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                                          125
Leu Ser His Pro Met Gln Glu Thr Met Pro His Ala Gly Ser Ser Asp
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                    135
Gln Pro His Pro Ser Ile Gln Gln Gly Leu His Val Pro His Pro Ser
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                                 155
Ser Gln Ser Gly Pro Pro Leu His His Ser Gly Ala Pro Pro Pro
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                              170
Pro Ser Gln Pro Pro Arg Gln Pro Pro Gln Ala Ala Pro Ser Ser His
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                  185
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Pro His Ser Asp Leu Thr Phe Asn Pro Ser Ser Ala Leu Glu Gly Gln
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Ala Gly Ala Gln Gly Ala Ser Asp Met Pro Glu Pro Ser Leu Asp Leu
  210
                   215
                                      220
Leu Pro Glu Leu Thr Asn Pro Asp Glu Leu Leu Ser Tyr Leu Asp Pro
                                 235
               230
Pro Asp Leu Pro Ser Asn Ser Asn Asp Asp Leu Leu Ser Leu Phe Glu
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Asn Asn
<210> 2871
<211> 786
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2107

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<211> 153
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Ile Ser Pro Asp Ala Phe Phe Gln Ile Asn Thr Ala Gly Ala Glu Met
                                              45
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Leu Tyr Trp Thr Val Gly Glu Leu Thr Gly Val Asn Ser Asp Thr Ile
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Leu Leu Asp Ile Cys Cys Gly Thr Gly Val Ile Gly Leu Pro Leu Ala
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Gln His Thr Ser Arg Val Leu Gly Ile Glu Leu Leu Glu Gln Ala Val
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Glu Asp Ala Arg Trp Thr Ala Ala Phe Asn Gly Ile Thr Asn Ser Glu
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Phe His Thr Gly Gln Ala Glu Lys Ile Leu Pro Gly Leu Leu Lys Ser
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Lys Glu Asp Gly Gln Ser Ile Val Ala Val Val Asn Pro Ala Arg Ala
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Gly Leu Arg Lys Asp Glu Gln Leu Phe
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<210> 2874
<211> 248
<212> PRT
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## <213> Homo sapiens

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Lys Leu Lys Ala Ser Ser Arg Thr Ser Ala Leu Leu Ser Gly Phe Ala
Met Val Ala Met Val Glu Val Gln Leu Asp Ala Asp His Asp Tyr Pro
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                                          60
Pro Gly Leu Leu Ile Ala Phe Ser Ala Cys Thr Thr Val Leu Val Ala
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Gly His Leu Phe Ala Leu Met Ile Ser Thr Cys Ile Leu Pro Asn Ile
                               90
              85
Glu Ala Val Ser Asn Cys Thr Ile Ser Thr Arg Lys Glu Ser Pro His
           100
                              105
Glu Arg Met His Arg His Ile Glu Leu Ala Trp Ala Phe Ser Thr Val
                                              125
       115
                         120
Ile Gly Thr Leu Leu Phe Leu Ala Glu Val Val Leu Leu Cys Trp Val
                                          140
                      135
Lys Phe Leu Pro Leu Lys Lys Gln Pro Gly Gln Pro Arg Pro Thr Ser
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                  150
Lys Pro Pro Ala Ser Gly Ala Ala Ala Asn Val Ser Thr Ser Gly Ile
                                  170
                                                      175
               165
Thr Pro Gly Gln Ala Ala Ala Ile Ala Ser Thr Thr Ile Met Val Pro
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                             185
Phe Gly Leu Ile Phe Ile Val Phe Ala Val His Phe Tyr Arg Ser Leu
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                                     205
Val Ser His Lys Thr Asp Arg Gln Phe Gln Glu Leu Asn Glu Leu Ala
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Glu Phe Ala Arg Leu Gln Asp Gln Leu Asp His Arg Gly Asp His Pro
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Leu Thr Pro Gly Ser His Tyr Ala
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<210> 2875

<211> 593

<212> DNA

<213> Homo sapiens

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235

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Dwa		T	Arg	1723	Dro		Dha	Car	Glu	Glu		Dhe	Met	Glu	Cve
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Met	GLY	пеп	ьец	325	FIU	БСЦ	FIIC	ДСИ	330	<b>J</b> C.	0.1	cys	-,-	335	
LON	Clv	т1 о	Ser		Acn	Gln.	Glu	Hic		Pro	Phe	Glv	Pro		Val
Leu	GIU	116	340	пеп	rop	GIII	GIU	345	110	110	1110	<b>-</b> 1	350	• • • •	,,,
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ıyı	GIII	355	GIII	ALG	1111	719	360	110	БСС		200	365		017	·p
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Lvs	Asn	Tle	Leu		Tvr	Ile	Gln	Glv		Ser	Pro	Leu	Ser		Thr
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Glu Val Thr Ser Lys Leu Lys Ser Tyr Glu Phe Arg Gly Ser Pro Phe
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Gln Val Thr Arg Gly Asp Tyr Ala Pro Ile Leu Gln Lys Val Val Glu
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Gln Leu Glu Lys Ala Lys Ala Tyr Ala Ala Asn Ser His Gln Gly Gln
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Met Leu Ala Gln Tyr Ile Glu Ser Phe Thr Gln Gly Ser Ile Glu Ala
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His Lys Arg Gly Ser Arg Phe Trp Ile Gln Asp Lys Gly Pro His Arg
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Pro Pro Ser Arg
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40
Cys Cys Pro Pro Lys Arg Lys Thr Cys Ser Trp Ala Trp Trp Tyr Thr
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35

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Gly Asn Ala Met Cys Ser His Lys Cys Thr Thr Ile Val His Gln His
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Leu Tyr Asn Ile Lys Gly Val Ile Tyr Lys Ser Thr Ala Ile Val His
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Arg Met Val Met Ala Gly Glu Pro Arg Pro Pro Val Leu Cys Ser Phe
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Gln Ser Glu Lys Phe Ala Lys Val Glu Asn Gln Tyr Gln Leu Leu Lys
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Val Lys Thr Trp Ser Asn Arg Ile Thr Glu Lys Gln Asp Ile Leu Asn
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Thr Thr Ser Met Ala Lys Asp Val Gly Leu Lys Ile Thr Ser Val Lys
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Thr Asp Ile Arg Arg Ile Ser Gly Leu Val Thr Asp Val Ile Ser Leu
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Thr Asp Ser Val Gln Glu Leu Glu Asn Lys Ile Glu Lys Val Glu Lys
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Thr Ala Thr Leu Arg Lys Thr Ala Ser Glu Asn Ser Gln Arg Ile Asn
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Thr Asp Arg Phe Leu Ser Leu Glu Gly Asp Arg Ala Lys Val Leu Lys
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Lys Asp Phe Ser Arg Leu Glu Pro Leu Val Asn Asp Leu Thr Leu Arg
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                                          300
Ile Gly Arg Leu Val Thr Asp Leu Leu Gln Arg Glu Lys Glu Ile Ala
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Pro Glu Pro Ser Ile Ser Gly Leu Lys Lys Leu His Pro Gln Leu Ser
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Leu Ser Glu Asp Val His Ala Pro Gln Val Ala Asn Asp Thr Glu Ala
                                       75
Gly Arg Lys Leu Asp Val Gly Pro Gln Leu Leu Asp Gln Leu Ala Gln
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Arg Lys Thr Asn Glu Ser Asp Ser Asp Ala Leu Arg Ile Lys Cys Lys

295

275

270

300

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Leu Cys His Leu Glu Thr Gln Val Lys Glu Val Lys Glu Lys Phe Glu
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<213> Homo sapiens

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Cys Cys Gly Asn Gln Ala Ala Gly Asn Asp Ala Leu Gln Asp Val Leu
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Glu	Tyr 50	Ile	Asp	Cys	Ile	Ser 55	Asn	Val	Ala	His	Val 60	Gly	His	Cys	His
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Gly	Ser	Glu 115	Ala	Asn	Asp	Leu	Ala 120		Arg	Leu	Ala	Arg 125	His	Tyr	Thr
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Pro	Tyr	Arg	Xaa	Arg	Thr	Thr	Pro	Thr	Gln	Leu	Trp	Xaa	Tyr	Ala	Asn
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Glu	Val	Lys 195	Arg	Val	Val	Ser	Ser 200	Ala	Gln	Glu	Lys	Gly 205	Arg	Lys	Ile
Ala	Ala 210	Phe	Phe	Ala	Glu	Ser 215	Leu	Pro	Ser	Val	Gly 220	Gly	Gln	Ile	Ile
Pro 225	Pro	Ala	Gly	Tyr	Phe 230	Ser	Gln	Val	Ala	Glu 235	His	Ile	Arg	Lys	Ala 240
Gly	Gly	Val	Phe	Val 245	Ala	Asp	Glu	Ile	Gln 250	Val	Gly	Phe	Gly	Arg 255	Val
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Cys	Val 290	Ala	Ala	Thr	Gln	Pro 295	Val	Ala	Arg	Ala	Phe 300	Glu	Ala	Thr	Gly
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Leu	Ser	Thr	Asp	Gly 405	Pro	Gly	Arg	Asn	Ile 410	Leu	Lys	Phe	Lys	Pro 415	Pro
Met	Cys	Phe	Ser 420	Leu	Asp	Asn	Ala	Arg 425	Gln	Val	Val	Ala	Lys 430	Leu	Asp
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Arg Arg Thr Gly Ser Thr Ala Ala Pro Ala Ser Ala Pro Pro Ile Ala
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Gly Thr Gly Ser Pro Gly Trp Gln Arg Ser Leu Gln Pro Ala Leu Gly
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Thr Asp Val Arg Gly Arg Arg Lys Lys Lys Thr Pro Arg Lys Ala Glu
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Asp Thr Arg Glu Asn Arg Lys Leu Glu Asn Lys Asn Ala Phe Leu Glu
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Gly Arg Arg Leu Ser Gly Glu Glu Arg Gly Leu Trp Ser Thr Asp Ser
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                                 170
Ala Glu Glu Asp Lys Glu Thr Lys Arg Asn Glu Ser Lys Glu Lys Tyr
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Gln Lys Arg His Asp Ser Asp Lys Glu Glu Lys Gly Arg Lys Glu Pro
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Lys Gly Leu Lys Thr Leu Lys Glu Ile Arg Asn Ala Phe Asp Leu Phe
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Lys Leu Thr Pro Glu Glu Lys Asn Asp Val Ser Glu Asn Asn Arg Lys
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Leu
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Gln Asn Pro Leu Val Ser Glu Arg Leu Glu Leu Ser Val Leu Tyr Lys
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His Lys Lys Tyr Ser Tyr Ile Arg Lys Thr Arg Pro Asp Gly Asn Cys
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Phe Tyr Arg Ala Phe Gly Phe Ser His Leu Glu Ala Leu Leu Asp Asp
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145 150 155 160
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*	370	n	17-3	۸	C1.4	375	Dro	Bro	Aen	Ser		Ser	Glu	Δla	Δan
385	GIII	PIO	val	АЗР	390	Val	710		nsp	395		001			400
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C ~ ~	C15	Clu	C1=		Thr	בומ	Dro	Lve		Met	Glu	Glu	Thr		Val
Ser	GIII	GIU	420	Cys	1111	AIG	110	425				014	430		
Dha	C1	Cvc		C1.	Thr	Bro	Glu		Δla	Tle	Thr	Ser		Thr	Ser
Pne	GIU		PIO	GIA	TIII	PLO	440	ита	AIG	110	****	445	204	••••	
~1	<b>71</b>	435	c	N	T	e~~		GI.	Glu	Tle	Agn	Glu	Lve	Glu	Glu
GIY	450	ser	ser	Asp	ıyı	455	Deu	GIU	014		460		~,0	0.1.0	
T		C1	1207	Dva	Tuc		Glu	λla	Glu	Δen		Ser	Pro	Lvs	Ser
465	261	Gru	vai	PIO	470	VAI	O.L.	ALU		475				1	480
	7	Tla	Dro	Dho		Sor	Thr	λen	Tle		Asn	Thr	Leu	Lvs	
GIII	Asp	116	PIO	485	vai	361	1111	пор	490					495	
) co	Dro	Acn	Sar		T.A11	Glv	Δsn	Glv		Glv	Glu	Phe	Ser		Asn
ASP	110	Asp	500	AIG	Deu	Ory	,,,,,,,	505		<b>-</b> 1			510		
Ser	Met	Glu		Lvs	Gln	Glu	Thr		Ser	Thr	Asp	Gly		Glu	Pro
361	Mec	515	GIU	Lys	O.1		520					525			
His	Ser		Val	Tvr	Asp	Thr		Asn	Glv	Lvs	Lvs	Val	Val	Asp	Ser
	530			-1-	···	535			2		540			-	
Tle		Asn	Leu	Lvs	Ser		Glv	Pro	Asn	Gln	Glu	Asn	Val	Gln	Asn
545	5			-1-	550		2			555					560
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Val	Lys	Lys	Thr	Glu	Ile	Asn	Val	Glu	Gly	Val	Ala	Lys	Asn	Asn	Asn
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Ile	Asp	Met	Glu	Val	Glu	Arg	Pro	Ser	Asn	Ser	Glu	Ala	His	Glu	Thr
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	610					615					620				_
Pro	Asp	Gln	Lys	Leu	Asn	Gln	Pro	Ser	Ala		Lys	Thr	Lys	Asp	
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Ala	Ile	Gln	Thr		Pro	Ser	Cys	Asn		Phe	Asp	Gly	Lys		GIn
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Asp	His	Asn		Ser	Asp	Ser	Lys		Glu	Glu	Cys	Val		Thr	Ser
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Val		Thr	Ser	Arg	GIU		Arg	Ser	GIN	GTA	700	Leu	116	116	птэ
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Car	T1	Lau	Lve		Tur	Pro	T.e.11	Tur		Gln	Asp	Tyr	Asn		Lvs
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805

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Val Ser Gly His Tyr Val Thr Ser Ala Ala Ala Lys Ser Val His Ala
   915 920
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Asp Met Leu Pro Ser Pro Glu Gln Thr Leu Ser Pro Leu Ser Lys Met
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945 950
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Ile Gly Gln Ala Pro Ala Glu Ala Ser Pro Pro Pro Ile Ala Pro Lys
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Thr Glu Glu Gly Lys Thr His Ser Val Asn Lys Phe Val Asp Ile Pro
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Gln Leu Gly Val Ser Asp Lys Glu Asn Asn Ser Ala His Asn Glu Gln
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Gln Ser Leu Leu Thr Ala Ile Arg Ser Gly Glu Ala Ala Ala Lys Leu
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Asn Lys Lys Lys Arg Leu Ala Leu Asp Ser Glu Ala Ala Val Ser Ala
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Asp Lys Pro Asp Ser Val Leu Thr His His Val Pro Arg Asn Leu Gln
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240
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Ser Gly Glu Asp Asn Lys Trp Glu Arg Glu Ser Gln Glu Thr Thr Arg
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Leu Glu Thr Gln Asn Asn Leu Gln Ala Gln Ile Leu Ala Leu Gln
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Arg Gln Thr Val Ser Leu Gln Glu Gln Asn Thr Thr Leu Gln Thr Gln
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Glu Asn Glu Asn Glu Ser Val Ile Lys Glu Arg Glu Asp Leu Lys Ser
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Glu Arg Gln Ala Ser Glu Tyr Glu Ser Leu Ile Ser Lys His Gly Thr
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Leu Lys Ser Ala His Lys Asn Leu Glu Val Glu His Arg Asp Leu Glu
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Asp Pro Glu Val Pro Ser Pro Gln Ser Lys Asp Ala Gln Tyr Thr Val
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Thr Phe Ser His Cys Lys Asp Tyr Val Val Asn Val Thr Glu Glu Phe
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Arg Cys Ala Gly Asn Gly Ser Ser Ile Trp Glu Val Asp Ser Leu His
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Ala Lys Thr Arg Thr Leu His Asp Arg Trp Asn Glu Val Thr Arg Arg
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Ile Glu Met Trp Ile Ser Ile Leu Glu Leu Asn Glu Leu Gly Glu Tyr
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Phe Gln Leu Arg Gln Gly His Ser Arg Arg Val Gln Val Thr Val Lys
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Pro Val Gln His Ser Gly Thr Leu Pro Leu Met Val Glu Ala Ile Leu
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Ser Val Ser Ile Gly Cys Val Thr Ala Arg Ser Thr Lys Leu Gln Arg
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480
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Val Phe Pro Leu Gly Tyr Gln Tyr Pro Ser Leu Asp Gln Leu Ala Asp
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Cys Pro Val Met Leu Val Val Gly Asp Gln Ala Pro His Glu Asp Ala
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Val Val Glu Cys Asn Ser Lys Leu Asp Pro Thr Gln Thr Ser Phe Leu
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Ser Val Glu Ala Pro Ala Ala Pro Arg Pro Thr Ala Thr Gln Leu Thr
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Leu Phe Ala Asn Leu Asn Gln Leu Gly Arg Pro Ala Ser Glu Glu Lys
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Leu Glu Thr Leu Leu Arg Tyr Tyr Asp Gln Ile Cys Ser Ile Glu Pro
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Lys Phe Pro Phe Ser Glu Asn Gln Ile Cys Leu Thr Phe Thr Trp Lys
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Asp Ala Phe Asp Lys Gly Ser Leu Phe Gly Gly Ser Val Lys Leu Ala
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            100
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Leu Ala Ser Leu Gly Tyr Glu Lys Ser Cys Val Leu Phe Asn Cys Ala
                                                125
                            120
Ala Leu Ala Ser Gln Ile Ala Ala Glu Gln Asn Leu Asp Asn Asp Glu
                                            140
   130
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Gly Leu Lys Ile Ala Ala Lys His Tyr Gln Phe Ala Ser Gly Ala Phe
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                                        155
Leu His Ile Lys Glu Thr Val Leu Ser Ala Leu Ser Arg Glu Pro Thr
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Val	Acn	Tla	Ser		Acn	Thr	Val	Glv		T.e.u	Ser	Leu	Tle		ten
Val	vah	116	180		ASP	****	VU.	185					190		200
Δla	Gln	Δla		Glu	Val	Phe	Phe		Lvs	Ala	Thr	Ara		Lvs	Met
nzu	· · · ·	195					200		-,-			205		-1-	
Lve	λen		Tle	T1e	Δla	Lys	-	Δla	Asn	Gln	Ala		Asn	Tvr	Phe
Буз	210	ALU	110	110	71.14	215				·	220			- /	
Glv		Δla	Dhe	Lvg	Gla	Cys	Gln	Tyr	Lvs	Asp		T.en	Pro	Lvs	Glu
225	vab	AIG	1110	u, s	230	cys	01	.,-	2,0	235				_,_	240
	Dho	Dro	Va l	T.A11		Ala	Lva	Hie	Cva		Met	Gln	Δla	Δen	
Val	FIIC	FIU	val	245	ALG	n_a	БуЗ	1113	250	110	1100	OIN	AIG	255	1124
Cl.	Тъ със	uic	Gl n		Tla	Leu	בומ	Lare		Gln	Lve	Tare	Dhe		Glu
GIL	TYL	1113	260	561	110	Deu	7.24	265	· · · ·	02	2,0	270	270	01,	<b>01</b> u
Glu	Tla	λla		T.em	G) n	His	Δla		Glu	Len	Tle	Lvs		Val	Δla
GIU	116	275	AL 9	Deu	0111	****	280	7.4				285	••••	• • • •	
Car	Ara		Nen	Glu	Tur	Val		Val	Lvs	Asp	Phe		Δsn	T.vs	Tle
Jer	290	1 7 2	vaħ	014	.,.	295	no	VUL	2,5	p	300	-		_,,	
Agn		αla	Leu	Δla	Δla	Ala	Lvs	Lvs	Asn	Asn		Phe	Tle	Tvr	His
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T.e.u	Val	Lvs	Ser		Pro	Val	Asn	Val		Tle	Ser	Gln	Lvs		Thr
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Asp	I.e.i	Phe		Lvs	Met	Val	Pro		Ser	Val	Gln	Gln		Leu	Ala
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Thr	Val	Leu		Lys	Ala	Val	Gln		Asp	Gly	Gln	Val		Glu	Cys
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Tyr	Gln		His	Arg	Asp	Thr		Val	Leu	Leu	Cys		Pro	Glu	Pro
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Glu		Asn	Ala	Ala	Ile	Pro	Ser	Ala	Asn	Pro		Lys	Thr	Met	Gln
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Glu	Val	Lys	Lys		Arg	Glu	Gly	Leu		Asn	Asp	Leu	Lys		val
_		_		565	_	_	-1		570			- •	-1	575	-1
Asn	Phe	Asp		Thr	Ser	Lys	Phe		Thr	ALA	Leu	Ата		qeA	GIY
	<b>T</b> 1:		580	<b>~1</b>	<b>71</b> -		0	585	mb	~a	1	<b>N</b>	590	177	m
vaı	тте	ASN	ĢΣU	GIU	WTG	Leu	ser	val	IIII	GIU	ren	ASP	Arg	val	TAL

600

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Gln Pro Pro Ala Arg Pro Pro Pro Pro Val Leu Pro Ala Asn Arg Ala
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Met Pro Met Gly Tyr Asn Pro Tyr Ala Tyr Gly Gln Tyr Asn Met Pro
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Tyr Pro Pro Val Tyr His Gln Ser Pro Gly Gln Ala Pro Tyr Pro Gly
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840

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Glu Asn Ala Lys Asn Phe Pro Gln Cys Val Leu Glu Ile Ser Asp Gln
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Glu Val Leu Glu Trp Tyr Thr Ala Lys Asp Phe Ile Val Gly Lys Ser
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Leu Thr Ile Leu Gly Arg Thr Phe Phe Ile Tyr Asp Cys Asp Pro Phe
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Thr Arg Arg Tyr Tyr Lys Glu Lys Phe Gly Ile Thr Asp Leu Pro Arg
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Ile Asp Val Ser Lys Arg Glu Pro Pro Pro Val Lys Gln Glu Leu Pro
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Pro Tyr Asn Gly Phe Gly Leu Val Glu Asp Ser Ala Gln Asn Cys Phe
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Ala Leu Ile Pro Lys Ala Pro Lys Lys Asp Val Ile Lys Met Leu Val
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410

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Ile Phe Thr Asn Gln Met Ser Ile Gly Arg Gly Lys Leu Pro Ala Glu
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Glu Phe Lys Ala Lys Val Glu Ala Val Val Glu Lys Leu Gly Val Pro
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Phe Gln Val Leu Val Ala Thr His Ala Gly Leu Tyr Arg Lys Pro Val
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Thr Gly Met Trp Asp His Leu Gln Glu Gln Ala Asn Asp Gly Thr Pro
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Ala Asn Trp Ala Pro Gly Arg Lys Lys Asp Phe Ser Cys Ala Asp
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Arg Leu Phe Ala Leu Asn Leu Gly Leu Pro Phe Ala Thr Pro Glu Glu
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120

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                           40
Asp Val Met Leu Glu Thr Tyr Ser Ser Leu Val Ser Leu Gly His Cys
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Ile Thr Lys Pro Glu Met Ile Phe Lys Leu Glu Gln Gly Ala Glu Pro
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Trp Ile Val Glu Glu Thr Leu Asn Leu Arg Leu Ser Gly Gly Ser Lys
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Ile Gly Arg Gly Ser Phe Lys Thr Val Tyr Arg Gly Leu Asp Thr Asp
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Thr Thr Val Glu Val Ala Trp Cys Glu Leu Gln Thr Arg Lys Leu Ser
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Arg Ala Glu Arg Gln Arg Phe Ser Glu Glu Val Glu Met Leu Lys Gly
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Leu Gln His Pro Asn Ile Val Arg Phe Tyr Asp Ser Trp Lys Ser Val
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                              105
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Leu Arg Gly Gln Val Cys Ile Val Leu Val Thr Glu Leu Met Thr Ser
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                                              125
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Gly Thr Leu Lys Thr Tyr Leu Arg Arg Phe Arg Glu Met Lys Pro Arg
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                                          140
Val Leu Gln Arg Trp Ser Arg Gln Ile Leu Arg Gly Leu His Phe Leu
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                  150
His Ser Arg Val Pro Pro Ile Leu His Arg Asp Leu Lys Cys Asp Asn
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                                 170
Val Phe Ile Thr Gly Pro Thr Gly Ser Val Lys Ile Gly Asp Leu Gly
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                                                  190
Leu Ala Thr Leu Lys Arg Ala Ser Phe Ala Lys Ser Val Ile Gly Thr
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Pro Glu Phe Met Ala Pro Glu Met Tyr Glu Glu Lys Tyr Asp Glu Ala
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Val Asp Val Tyr Ala
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240
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                                25
Leu Xaa Thr Gln Ala Gly Ile Gln Trp Cys Asp Leu Ser Ser Leu Gln
                            40
                                                45
Pro Pro Pro Pro Arg Phe Lys Arg Phe Ser Cys Leu Ser Leu Leu Ser
                                            60
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Ser Trp Asp Ser Asp Arg Cys Leu Pro Pro His Pro Gly Asp Phe Cys
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Ile Phe Ser Arg Asp Gly Val Ser Pro Cys Cys Ser Gly Trp Ser Arg
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Thr Pro Asp Leu Lys
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780

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Ser Thr Ile Lys Asp Ile Val Ser Thr Thr Ile Pro Ala Ser Ser Glu
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Ile Thr Arg Ile Glu Met Glu Ser Thr Ser Thr Leu Thr Pro Thr Pro
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                                   60
Arg Glu Thr Ser Thr Ser Gln Glu Ile His Ser Ala Thr Lys Pro Ser
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Thr Val Pro Tyr Lys Ala Leu Thr Ser Ala Thr Ile Glu Asp Ser Met
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Thr Gln Val Met Ser Ser Ser Arg Gly Pro Ser Pro Asp Gln Ser Thr
                          105
                                      110
         100
Met Ser Gln Asp Ile Ser Thr Glu Val Ile Thr Arg Leu Ser Thr Ser
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                                       125
    115
Pro Ile Lys Thr Glu Ser Thr Glu Met Thr Ile Thr Thr Gln Thr Gly
           135 140
Ser Pro Gly Ala Thr Ser Arg Gly Thr Leu Thr Leu Asp Thr Ser Thr
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       150
Thr Phe Met Ser Gly Thr His Ser Thr Ala Ser Gln Arg Phe Ser His
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Ser Gln Met Thr Ala Leu Met Ser Arg Thr Pro Gly Asp Val Pro Trp
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                          185
Leu Thr His Pro Ser Gly Glu Glu Pro Ala Ser Ala Ser Phe Ser Leu
      195 200
                                        205
Ala Ser Pro Val Leu Thr Ser Phe Phe Ser Phe Phe Ala His Ser Gln
                    215
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Lys Pro Pro Pro Phe Leu Val Pro Gly Gln Thr Phe Ser Leu Gly Leu
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Gly Lys Pro Lys Met Trp Gly Gln Pro Arg Thr Glu Thr Phe Pro Pro
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Met Asp Asn Leu Phe Glu Lys Gly Pro Phe
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Ala Phe Met Gly Leu Arg Gly Glu Lys Val His Ala Asn Ser Ser Met
                            40
       35
Gly Gly His Gly Trp Ala Gln Gly Lys Ala Pro Gln Val Ala Leu Ala
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   50
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Val Ser Gly Thr Gly Asp Pro Ser Pro Arg Leu Gln Ala Phe Pro Gly
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Leu Glu Val Gly Leu His Cys Gly Pro Ala Ser Phe His Pro Gly Ala
                                    90
                85
Cys Leu Pro Pro Ala Ala Val His Gly Asp Gln Ala Val His Val Lys
                                105
                                                    110
Gly Cys Leu Gln Ala Ser Thr Gly Leu Ser Ser Val His Pro Ser Ala
                            120
                                               125
       115
Ser Phe Pro Cys Leu Ser Val Pro Lys Ala Trp Arg Gly Pro Lys Trp
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Gln Gly Gly Trp His Val Ser Thr Thr Pro Ser Met Cys Thr Leu Ser
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Trp Ala Val Thr Ala Pro Gly
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<210> 3001
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            20
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Glu Val Gln Arg Leu Ser Pro Tyr Val Cys Leu Gly Glu Ser Gln Lys
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Val Glu Ser Gln Pro Cys Ser Ala His Gln Cys Phe Phe Tyr Asn Pro
Asp Ile Ala Lys Thr Ala Val Pro Thr Glu Ala Ser Ser Pro Ala Gln
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70
Ala Leu Pro Pro Xaa Ser Thr Lys Ala Ser Leu Ser Gly Lys Gly Tyr
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Phe Thr Phe Asp Asp Ala Gln Glu Asp Arg Lys Arg Leu Ala Glu
                           40
                                               45
       35
Leu Leu Val Ser Val Leu Glu Gln Gly Leu Pro Pro Ser His Arg Val
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Ile Trp Leu Gln Ser Val Arg Ile Leu Ser Arg Asp Arg Asn Cys Leu
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Asp Pro Phe Thr Ser Arg Gln Ser Leu Gln Ala Leu Ala Cys Tyr Ala
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                                                       95
Asp Ile Ser Val Ser Glu Gly Ser Val Pro Glu Ser Ala Asp Met Asp
                               105
                                                   110
           100
Val Val Leu Glu Ser Leu Lys Cys Leu Cys Asn Leu Val Leu Ser Ser
                           120
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Pro Val Ala Gln Met Leu Ala Ala Glu Ala Arg Leu Val Val Lys Leu
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Thr Glu Arg Val Gly Leu Tyr Arg Glu Arg Ser
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            20
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Asp Gln Tyr Val Asn Lys Arg Tyr Pro Gly Leu Val Lys Ile Val Arg
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                            40
                                                45
Asn Ser Arg Arg Glu Gly Leu Ile Arg Ala Arg Leu Gln Gly Trp Lys
Ala Ala Thr Ala Pro Val Val Gly Phe Phe Asp Ala His Val Glu Phe
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70
65
Asn Thr Gly Trp Ala Glu Pro Ala Leu Ser Arg Ile Arg Glu Asp Arg
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Arg Arg Ile Val Leu Pro Ala Ile Asp Asn Ile Lys Tyr Ser Thr Phe
                            105
          100
Glu Val Gln Gln Tyr Ala Asn Ala Ala His Gly Tyr Asn Trp Gly Leu
                                           125
                        120
Trp Cys Met Tyr Ile Ile Pro Pro Gln Asp Trp Leu Asp Arg Gly Asp
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Gly Asn Pro Arg Lys Met Val Lys Thr Trp Ala Glu Lys Glu Met Arg
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Asn Leu Ile Arg Leu Asn Thr Ala Glu Ile Pro Cys Pro Glu Pro Ile
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Met Leu Arg Ser His Val Leu Val Met Ser Phe Ile Gly Lys Asp Asp
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Met Pro Ala Pro Leu Leu Lys Asn Val Gln Leu Ser Glu Ser Lys Ala
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Arg Glu Leu Tyr Leu Gln Val Ile Gln Tyr Met Arg Arg Met Tyr Gln
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Asp Ala Arg Leu Val His Ala Asp Leu Ser Glu Phe Asn Met Leu Tyr
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His Gly Gly Gly Val Tyr Ile Ile Asp Val Ser Gln Ser Val Glu His
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Asp His Pro His Ala Leu Glu Phe Leu Arg Lys Asp Cys Ala Asn Val
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Asn Asp Phe Phe Met Arg His Ser Val Ala Val Met Thr Val Arg Glu
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Leu Phe Glu Phe Val Thr Asp Pro Ser Ile Thr His Glu Asn Met Asp
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Ala Tyr Leu Ser Lys Ala Met Glu Ile Ala Ser Gln Arg Thr Lys Glu
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Glu Arg Ser Ser Gln Asp His Val Asp Glu Glu Val Phe Lys Arg Ala
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Tyr Ile Pro Arg Thr Leu Asn Glu Val Lys Asn Tyr Glu Arg Asp Met
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Asp Ile Ile Met Lys Leu Lys Glu Glu Asp Met Ala Met Asn Ala Gln
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Gln Asp Asn Ile Leu Pro Asp Cys Tyr Arg Ile Glu Glu Arg Phe Val
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Arg Ser Ser Glu Gly Pro Cys Thr Leu Glu Asn Gln Val Glu Glu Arg
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       260
Thr Cys Ser Asp Ser Glu Asp Ile Gly Ser Ser Glu Cys Ser Asp Thr
   275 280 285
Asp Ser Glu Glu Gln Gly Asp His Ala Arg Pro Lys Lys His Thr Thr
 290 295 300
Asp Pro Asp Ile Asp Lys Lys Glu Arg Lys Lys Met Val Lys Glu Ala
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Gln Arg Glu Lys Arg Lys Asn Lys Ile Pro Lys His Val Lys Lys Arg
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Lys Glu Lys Thr Ala Lys Thr Lys Lys Gly Lys
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agettetgaa geatetaggt gatettetta aatetttgae aggaaagagt aggaaaettt
180
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ctcagtgaag aggatattct tcgaaataag gccatcatgg agagtttgag taaaggtgga
aacataatgg aacagaattt tgagccgatt cgaagacagt ctcttacacc tcctcctcag
aacactatta catgggaaga atatatatet getgaaaatg gaaaagetee teatetgggt
420
agagaattgg tgtgcaaaga gagtaagaaa acgtttaaag ctacgatagc catgagccag
gaatttccct tagggataga gttattattg aatgttttag aagtagtagc tcccttcaag
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ttagatatac ctgtgtttcc cacaatcaca gccactgtga cttttcagga gtttcgatac
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gatgaatttg atggctccat ctttactata cctgatgact acaaggaaga cccaagccgt
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acacattgaa tcgacacatc agtaatacga tacagtgaaa tgggcctcta ataagaattt
900
cagcgagttt tctgatgtgc cattttttgt ctttttaaaa atatacatat tataaatgta
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Trp Glu Glu Tyr Ile Ser Ala Glu Asn Gly Lys Ala Pro His Leu Gly
                           40
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Arg Glu Leu Val Cys Lys Glu Ser Lys Lys Thr Phe Lys Ala Thr Ile
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                                          60
Ala Met Ser Gln Glu Phe Pro Leu Gly Ile Glu Leu Leu Leu Asn Val
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                                      75
Leu Glu Val Val Ala Pro Phe Lys His Phe Asn Lys Leu Arg Glu Phe
               85
                                   90
Val Gln Met Lys Leu Pro Pro Gly Phe Pro Val Lys Leu Asp Ile Pro
                                                  110
                               105
Val Phe Pro Thr Ile Thr Ala Thr Val Thr Phe Gln Glu Phe Arg Tyr
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Asp Pro Ser Arg Phe Pro Asp Leu
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aatggtgaag gtgaaataga agatgaggag gaggagggtt atgatgatga tgatgatgac
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780
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Lys Glu Lys Asp Asp Ile Leu Phe Glu Asp Leu Gln Asp Asn Val Asn
                                             45
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Glu Asn Gly Glu Gly Glu Ile Glu Asp Glu Glu Glu Glu Gly Tyr Asp
                       55
Asp Asp Asp Asp Trp Asp Trp Asp Glu Gly Val Gly Lys Leu Ala
                                      75
                   70
Lys Gly Tyr Val Trp Asn Gly Gly Ser Asn Pro Gln Ala Asn Arg Gln
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                                 90
Thr Ser Asp Ser Ser Ser Ala Lys Met Ser Thr Pro Ala Asp Lys Val
                              105
           100
Leu Arg Lys Phe Glu Asn Lys Ile Asn Leu Asp Lys Leu Asn Val Thr
                                             125
                          120
Asp Ser Val Ile Asn Lys Val Thr Glu Lys Ser Arg Gln Lys Glu Ala
                     135
                                         140
Asp Met Tyr Arg Ile Lys Asp Lys Ala Asp Arg Ala Thr Val Glu Gln
                150
                            155
Val Leu Asp Pro Arg Thr Arg Met Ile Leu Phe Lys Met Leu Thr Arg
                                  170
Gly Ile Ile Thr Glu Ile Asn Gly Cys Ile Ser Thr Gly Lys Glu Ala
                                                 190
                              185
           180
Asn Val Tyr His Ala Ser Thr Ala Asn Gly Glu Ser Arg Ala Ile Lys
                           200
                                              205
Ile Tyr Lys Thr Ser Ile Leu Val Phe Lys Asp Arg Asp Lys Tyr Val
                       215
                                          220
Ser Gly Glu Phe Arg Phe Arg His Gly Tyr Cys Lys Gly Asn Pro Arg
                   230
                                      235
Lys Met Val Lys Thr Trp Ala Glu Lys Glu Met Arg Asn Leu Ile Arg
              245
                                  250
Leu Asn Thr Ala Glu Ile Pro Cys Pro Glu Pro Ile Met Leu Arg Ser
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260
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His Val Leu Val Met Ser Phe Ile Gly Lys Asp Asp Ile Ser Phe His
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                          280
Ser Arg Pro Ala Pro Leu Leu Lys Asn Val Gln Leu Ser Glu Ser Lys
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                                          300
Ala Arg Glu Leu Tyr Leu Gln Val Ile Gln Tyr Met Arg Arg Met Tyr
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                 310
Gln Asp Ala Arg Leu Val His Ala Asp Arg Arg
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Arg Ile Lys Leu Asn Asp Arg Met Thr Phe Pro Glu Glu Leu Asp Met
       35
                           40
                                              45
Ser Thr Phe Ile Asp Val Glu Asp Glu Lys Ser Pro Gln Thr Glu Ser
                       55
                                        60
Cys Thr Asp Arg Gly Ala Glu Asn Glu Gly Ser Cys His Ser Asp Gln
65
                   70
                                       75
Met Ser Asn Asp Phe Ser Asn Asp Gly Val Asp Glu Gly Ile Cys
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Phe Glu Thr Asn Ser Gly Thr Glu Lys Ile Ser Lys Ser Gly Pro Glu
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Lys Asn
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gttggtcctg atgttattcc cctgccacac atctacggag ctcgaatcaa aggtgtggaa
gtgttctgtc ctctggatcc cccgccgcca tatgaagctg tggtgagcca gatggaccag
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300
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Thr Pro Arg Met Asn Arg Arg Leu Val Gly Pro Asp Val Ile Pro Leu
Pro His Ile Tyr Gly Ala Arg Ile Lys Gly Val Glu Val Phe Cys Pro
                       55
                                            60
Leu Asp Pro Pro Pro Pro Tyr Glu Ala Val Val Ser Gln Met Asp Gln
                    70
                                        75
Glu Gln Gly Ser Ser Phe Gln Met Ser Glu Gly Ser Glu Ala Ala Val
                                    90
               85
Ile Pro Leu Asp Leu Gly Cys Thr Gln Val Thr Gln Asp Gly Asp Ile
           100
                                105
                                                    110
Pro Asn Ile Pro Ala Glu Glu Asn Ala Ser Thr Ser Thr Pro Ser Ser
                           120
                                                125
Thr Leu Val Arg Pro Ile Arg Ser Arg Arg Ala Leu Pro Pro Leu Arg
                       135
                                            140
Thr Arg Ser Lys Ser Asp Pro Val Leu His Pro Ser Glu Glu Arg Ala
                                        155
                   150
Ala Pro Val Leu Ser Cys Glu Ala Ala Thr Gln Thr Glu Arg Arg Leu
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                                    170
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Asp Leu Ala Ala Val Thr Leu Arg Arg Gly Leu Arg Ser
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185 180 <210> 3033 <211> 821 <212> DNA <213> Homo sapiens <400> 3033 nnacgcgtga agggggaaaa tgacaagaca gacttggatg ttatacgaga aaatcataga ttcctatgga atgaggagga cgaaatggac atgacttggg agaagagact tgctaagaaa tactatgata aattatttaa ggaatactgc atagcagatc tcagtaaata taaagaaaat aagtttggat ttaggtggcg agtagaaaaa gaagtaattt caggaaaagg tcaatttttc 240 tgtggaaata aatattgtga taaaaaagaa ggcttaaaga gttgggaagt taattttggt tatattgagc atggtgagaa gagaaatgca cttgttaaat taaggttatg ccaagaatgt tccattaaat taaatttcca tcacaggaga aaagaaatca agtcaaaaaa aagaaaagat aaaaccaaaa aagactgtga agagtcatca cataaaaaat ccagattatc ttctgcagaa gaggeeteca agaaaaaaga taaaggacat teatetteaa agaaatetga agatteteta 540 cttagaaact ctgatgagga agaaagtget teagaatetg aactttggaa gggtecacta 600 ccagagacag atgaaaaatc acaggaagaa gaatttgatg agtattttca ggatttgttt 660 ctatgagacg agagagagaa gcctccgctc cttaatgtga aacttcatga agttttaaac ctcatgcaat ttgaaattcc atctacgtct ttatctgcaa gttacagctt ctgtgctttg 780 tottogoaac tacaaatooa ggttototoa goaacaacac a <210> 3034 <211> 221 <212> PRT <213> Homo sapiens <400> 3034 Xaa Arg Val Lys Gly Glu Asn Asp Lys Thr Asp Leu Asp Val Ile Arg 10 1 Glu Asn His Arg Phe Leu Trp Asn Glu Glu Asp Glu Met Asp Met Thr 30 Trp Glu Lys Arg Leu Ala Lys Lys Tyr Tyr Asp Lys Leu Phe Lys Glu 40 Tyr Cys Ile Ala Asp Leu Ser Lys Tyr Lys Glu Asn Lys Phe Gly Phe Arg Trp Arg Val Glu Lys Glu Val Ile Ser Gly Lys Gly Gln Phe Phe 75 Cys Gly Asn Lys Tyr Cys Asp Lys Lys Glu Gly Leu Lys Ser Trp Glu

90

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Val Asn Phe Gly Tyr Ile Glu His Gly Glu Lys Arg Asn Ala Leu Val
Lys Leu Arg Leu Cys Gln Glu Cys Ser Ile Lys Leu Asn Phe His His
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Arg Arg Lys Glu Ile Lys Ser Lys Lys Arg Lys Asp Lys Thr Lys Lys
                                            140
                       135
Asp Cys Glu Glu Ser Ser His Lys Lys Ser Arg Leu Ser Ser Ala Glu
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Glu Ala Ser Lys Lys Lys Asp Lys Gly His Ser Ser Ser Lys Lys Ser
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                                                        175
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Glu Asp Ser Leu Leu Arg Asn Ser Asp Glu Glu Glu Ser Ala Ser Glu
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Ser Glu Leu Trp Lys Gly Pro Leu Pro Glu Thr Asp Glu Lys Ser Gln
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            20
Ser Ser Asn Ser Pro Asp Pro His Ser Gly Pro Ala Pro Ser Gln Thr
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                                                45
Val Ile Leu Phe Leu Glu Gly Asn Arg Asp Pro Gly Gly Arg Gly Trp
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Pro
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                                                    30
Leu Phe Ile Val Pro Arg Gln Arg Leu Asp Leu Leu Pro Phe Tyr Ala
       35
                            40
Arg Leu Val Ala Thr Leu His Pro Cys Met Ser Asp Val Ala Glu Asp
   50
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                                            60
Leu Cys Ser Met Leu Arg Gly Asp Phe Arg Phe His Val Arg Lys Lys
Asp Gln Ile Asn Ile Glu Thr Lys Asn Lys Thr Val Arg Phe Ile Gly
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Glu Leu Thr Lys Phe Lys Met Phe Thr Lys Asn Asp Thr Leu His Cys
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Cvs	Thr	t.eu	Leu	Glu	Thr	Cvs	Glv	Arg	Phe	Leu	Phe	Arq	Ser	Pro	Glu
Cyb	130					135	2				140	_			
C		T 011	7 ~~	Thr	Car		Len	T.au	G111	Gln	Met	Met	Δτα	Lvs	Lvs
	nis	ьeu	Arg	1111	150	Vai	Deu	Deu	GIU	155			**** 5	-,-	160
145				•		N 1 -		m	17- 1		Mor	17-1	~1	N am	
Gin	Ala	Met	His	Leu	Asp	Ата	Arg	lyr		1111	Mec	val	GIU		ALA
				165				_	170	_			_	175	_
Tyr	Tyr	Tyr	Cys	Asn	Pro	Pro	Pro		Glu	Lys	Thr	Val		Lys	ьуs
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Arg	Pro	Pro	Leu	${\tt Gln}$	Glu	Tyr	Val	Arg	Lys	Leu	Leu	Tyr	Lys	Asp	Leu
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Ser	Lys	Val	Thr	Thr	Glu	Lys	Val	Leu	Arg	Gln	Met	Arg	Lys	Leu	Pro
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Trp	Gln	Asp	Gln	Glu	Val	Lvs	Asp	Tyr	Val	Ile	Cys	Cys	Met	Ile	Asn
225					230	•	-	•		235		-			240
	Trn	1 cn	Val	Lys		Asn	Ser	Ile	His		Val	Ala	Asn	Leu	Leu
116	ш	non	var	245	.,.	71011	001		250	-,-				255	
77.	C1	1 011	v. 1	Leu	Tree	Cln	Clu	Acn		Glv	110	Hic	Val		Asn
Ala	GIA	rea		Pén	ıyı	GIII	GIU	265	Val	Gry	110		270	,,,	7.0p
		_	260	_	-1-					<b>61</b>	171	7 ~~		Dwa	T
GIY	Val		GIu	Asp	ire	Arg		GIY	Mec	GIU	vai		GIII	PIO	Lys
		275				_	280		_		_	285	~1	_	
Phe	Asn	Gln	Arg	Arg	Ile		Ser	Ala	Lys	Phe		GIY	Glu	Leu	Tyr
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Asn	Tyr	Arg	Met	Val	Glu	Ser	Ala	Val	Ile		Arg	Thr	Leu	Tyr	
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Phe	Thr	Ser	Phe	Gly	Val	Asn	Pro	Asp	Gly	Ser	Pro	Ser	Ser	Leu	Asp
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Pro	Pro	Glu	His	Leu	Phe	Arg	Ile	Arg	Leu	Val	Cys	Thr	Ile	Leu	Asp
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Cvs	Phe		Val	Tyr	Phe	G1n		Tvr	Val	Trp	Trp	Lvs	Lys	Ser	Leu
Cys	370			- 1 -		375	5	-1-			380		•		
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385	vai	ırp	1111	БуЗ	390	1113	110	1110	110	395				-1-	400
	C + 14	N	The	Leu		Lau	Lau	7 24	Dro		Tla	Lve	Len	Cve	
ire	ser	ASP	Int		Giu	Leu	ьeu	Arg	410	Dys	110	Lys	Deu	415	7511
_	_		~1	405	-,		~1				T	<b>~1</b>	7		nho
Ser	Leu	GIu		Ser	IIe	Arg	GIN		GIN	ASP	Leu	Giu		GIU	Pne
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Leu	Ile		Leu	Gly	Leu	Val		Asp	Lys	Asp	Ser		Asp	Pne	Met
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Glu	Glu	Glu	Glu	Gly	Ser	Asp	Asn	Asp	Asp	Asp	Glu	Gly	Glu	Glu	Glu
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Glu	Glu	Glu	Asn	Thr	Asp	Tvr	Leu	Thr	Asp	Ser	Asn	Lys	Glu	Asn	Glu
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****	- 10 20	515					520					525	•	-	-
uic	1/2 l		Cve	Val	Glu	Acn		Acn	Phe	ΙÌΑ	Gl n		Leu	Asp	Lvs
1172	v a r		-13			ىرد									-1-

540

535

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Met Met Leu Glu Asn Leu Gln Gln Arg Ser Gly Glu Ser Val Lys Val
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His Gln Leu Asp Val Ala Ile Pro Leu His Leu Lys Ser Gln Leu Arg
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Lys Gly Pro Pro Leu Gly Gly Gly Glu Gly Glu Ala Glu Ser Ala Asp
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ctgtacaaag ataaacaaat ctggcattgt acaagtggtt ccgctggctc acagcacaca
360
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aaactatggt aaattgcttt acatctctac caggtcacct gatatacagg aaataaaact
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gaaaaaggtc tcaactgtcg ccagggttta cattcatctt cacaccagga gttacattca
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Ala Arg Ala Phe Glu Asp Gln Arg Val Ala Ser Phe Cys Thr Leu Thr
Asp Met Gln His Gly Gln Asp Leu Glu Gly Ala Gln Glu Leu Pro Leu
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Cys Val Asp Pro Gly Ser Gly Lys Glu Phe Met Asp Thr Thr Gly Glu
Arg Ser Pro Ser Pro Leu Thr Gly Lys Val Asn Gln Leu Glu Leu Ile
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90
Leu Arg Gln Leu Gln Thr Asp Leu Arg Lys Glu Lys Gln Asp Lys Ala
            100
                                105
Gly Leu Gln Ala Glu Val Gln His Leu Arg Gln Asp Asn Met Arg Leu
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ttgctgcacc aagtggagge gctagcegeg gcaggegtgg accaegtgat cetggeegtg
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cgaatctcca tgtcccatga agaggagcct ttggggacag ctgggcccct ggcgctggcc
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ggettetgga tggacattgg geageceaag gaetteetea etggeatgtg eetetteetg
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gtgctggtgg acccaagtgc ccgcatcggc cagaactgca gcattggccc caatgtgagc
960
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gatgcccgga tccgttccca ttcctggctt gagtcctgca ttgtgggctg gcgctgccgc
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gatgagetet aceteaacgg agecagegtg etgececaca agtetattgg egagteagtg
1200
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ccagagcctc gtatcatcat gtgaggggat gcagtggggc tggccgagcc ccggttttcc
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                             25
Ile Leu Leu His Gln Val Glu Ala Leu Ala Ala Ala Gly Val Asp His
                        40
Val Ile Leu Ala Val Ser Tyr Met Ser Gln Val Leu Glu Lys Glu Met
                                       60
 50
                  55
Lys Ala Gln Glu Gln Arg Leu Gly Ile Arg Ile Ser Met Ser His Glu
                  70
                                    75
Glu Glu Pro Leu Gly Thr Ala Gly Pro Leu Ala Leu Ala Arg Asp Leu
                               90
             85
Leu Ser Glu Thr Ala Asp Pro Phe Phe Val Leu Asn Ser Asp Val Ile
          100
                            105
                                              110
Cys Asp Phe Pro Phe Gln Ala Met Val Gln Phe His Arg His His Gly
                                            125
                         120
Gln Glu Gly Ser Ile Leu Val Thr Lys Val Glu Glu Pro Ser Lys Tyr
                                      140
           135
  130
Gly Val Val Cys Glu Ala Asp Thr Gly Arg Ile His Arg Phe Val
                150
                           155
Glu Lys Pro Gln Val Phe Val Ser Asn Lys Ile Asn Ala Gly Met Tyr
                             170
                                                   175
           165
Ile Leu Ser Pro Ala Val Leu Arg Arg Ile Gln Leu Gln Pro Thr Ser
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                                              190
Ile Glu Lys Glu Val Phe Pro Ile Met Ala Lys Glu Gly Gln Leu Tyr
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                        200
      195
Ala Met Glu Leu Gln Gly Phe Trp Met Asp Ile Gly Gln Pro Lys Asp
                    215
                                       220
Phe Leu Thr Gly Met Cys Leu Phe Leu Gln Ser Leu Arg Gln Lys Gln
                 230
                                    235
Pro Glu Arg Leu Cys Ser Gly Pro Gly Ile Val Gly Asn Val Leu Val
              245
                                250
Asp Pro Ser Ala Arg Ile Gly Gln Asn Cys Ser Ile Gly Pro Asn Val
                             265
                                               270
Ser Leu Gly Pro Gly Val Val Val Glu Asp Gly Val Cys Ile Arg Arg
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285
                            280
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Cys Thr Val Leu Arg Asp Ala Arg Ile Arg Ser His Ser Trp Leu Glu
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Ser Cys Ile Val Gly Trp Arg Cys Arg Val Gly Gln Trp Val Arg Met
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                                        315
Glu Asn Val Thr Val Leu Gly Glu Asp Val Ile Val Asn Asp Glu Leu
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Tyr Leu Asn Gly Ala Ser Val Leu Pro His Lys Ser Ile Gly Glu Ser
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Val Pro Glu Pro Arg Ile Ile Met
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ccagcetttg tttggggact cggaggcaga gtagacagtt accettacce ctgggttggg
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                                25
                                                    30
Gln Arg Leu Gly Asn Ile Ser Leu Lys Leu Glu Asn His Cys Pro Phe
                            40
       35
Asn Asp Thr Gln Pro Glu Asp Pro Lys Thr Gly Ser Pro Leu Lys Cys
                        55
                                            60
Gln Arg His Val Ser Trp Ser Glu Val Arg Glu Ala Asp Ser Gly Leu
                    70
Leu Leu Gly Gln Thr Pro Val Lys Arg Lys Arg Trp His His Glu Thr
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                                    90
Ser Ser Phe Ser Pro Cys Leu Trp Leu Lys Ala Arg Ala Ser Arg Ser
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            100
Lys Glu Ile
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gccaaaaccc tgctaaaaaa aatcteggaa gcatcaaagg catttcagat ggagaaaata
gaacatggct atgagaacat gaaccacttc acagtcaacc tcaatagaga agaaaagata
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                                25
            20
Leu Val Glu Ser Gly Ile Gln Phe Met Asp Glu Pro Glu Met Ala Val
                            40
                                                45
Phe Leu Gln Asn Ala Lys Thr Leu Leu Lys Lys Ile Ser Glu Ala Ser
   50
                        55
Lys Ala Phe Gln Met Glu Lys Ile Glu His Gly Tyr Glu Asn Met Asn
                                        75
                    70
His Phe Thr Val Asn Leu Asn Arg Glu Glu Lys Ile Ile Arg Glu Ile
                                    90
Asp Phe Tyr Arg Glu Asp Glu Asp Glu Glu Glu Glu Glu Gly Gly
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                               105
Gly Glu Lys Glu Glu Lys Glu Lys Trp Glu
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300
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Thr Ile Lys Glu Glu Lys Ser Ile Leu Tyr Leu Glu Gly Ser Ala Leu
                           40
Val Phe Glu Asp Ile Phe Arg Leu Ile Ala Phe Tyr Cys Val Ser Arg
                       55
                                           60
Asp Leu Leu Pro Phe Thr Leu Arg Leu Pro Gln Ala Ile Leu Glu Ala
                    70
                                        75
Ser Ser Phe Thr Asp Leu Glu Thr Ile Ala Asn Leu Gly Leu Gly Phe
                85
                                    90
Trp Asp Ser Ser Leu Asn Pro Pro Gln Glu Arg Gly Lys Pro Ala Glu
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                                105
Pro Pro Arg Asp Arg Ala Pro Gly Phe Pro Leu Val Ser Ser Leu Arg
       115
                            120
                                                125
Pro Thr Ala His Asp Ala Asn Cys Ala Cys Glu Ile Glu Leu Ser Val
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                                           140
Gly Asn Asp Arg Leu Trp Phe Val Asn Pro Ile Phe Ile Glu Asp Cys
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Ser Ser Ala Leu Pro Thr Asp Gln Pro Pro Leu Gly Asn Cys Pro Ser
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tgaagaetet caggitaeca geacaatate ecceptaeat tetecteaca agggaetece
180
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                                 25
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Lys Gln Glu Asn Asp Val Ile Asn Ala Ile Leu Lys Gln His Thr Glu
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Glu Lys Glu Phe Val Glu Lys His Phe Asn Asp Leu Asn Met Lys Ala
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Val Glu Gln Asp Glu Pro Ile Pro Gln Lys Pro Gln Ser Ala Phe Tyr
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Tyr Cys Arg Leu Leu Ser Ile Leu Gly Met Asn Ser Trp Asp Lys
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Arg Arg Ser Phe His Leu Leu Lys Lys Asn Glu Lys Leu Leu Arg Glu
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Asn Thr Gly Gly Ser Gln Ala Tyr Glu Asp Phe Val Ala Gly Leu Gly
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Trp Glu Val Asn Leu Thr Asn His Cys Gly Phe Met Gly Gly Leu Gln
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Lys Asn Lys Ser Thr Gly Leu Thr Thr Pro Tyr Phe Ala Thr Ser Thr
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Asp Ser Leu Thr Lys Lys Leu Arg His Leu Gly Asn Asp Glu Val His
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                                            285
Ile Val Trp Ser Glu His Thr Arg Asp Tyr Arg Arg Gly Ile Ile Pro
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                                          300
Thr Glu Phe Gly Asp Val Leu Ile Val Ile Tyr Pro Met Lys Asn His
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                                      315
Met Phe Ser Ile Gln Ile Met Lys Lys Pro Glu Val Pro Phe Phe Gly
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                                   330
Pro Leu Phe Asp Gly Ala Ile Val Asn Gly Lys Val Leu Pro Ile Met
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Val Arg Ala Thr Ala Ile Asn Ala Ser Arg Ala Leu Lys Ser Leu Ile
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Pro Leu Tyr Gln Asn Phe Tyr Glu Glu Arg Ala Arg Tyr Leu Gln Thr
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Ile Val Gln His His Leu Glu Pro Thr Thr Phe Glu Asp Phe Ala Ala
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Cys Ile Phe Tyr Asp Glu Asn Thr Lys His Tyr Glu Leu Leu Asn Tyr
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Ser Glu His Gly Thr Thr Val Asp Asn Val Leu Tyr Ser Cys Asp Phe
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Ser Glu Lys Thr Pro Pro Thr Pro Pro Ser Ser Ile Val Ala Lys Val
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Gln Ser Val Ile Arg Arg Arg His Gln Lys Gln Asp Glu Glu Pro
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Ser Glu Glu Ala Ala Met Met Ser Ser Gln Ala Gln Gly Pro Gln Arg
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Arg Pro Cys Asn Cys Lys Ala Ser Ser Ser Ser Leu Ile Gly Gly Ser
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Gly Ala Gly Trp Glu Gly Thr Ala Leu Leu His His Gly Ser Tyr Ile
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Lys Leu Gly Cys Leu Gln Phe Val Phe Ser Ile Thr Glu Phe Ala Thr
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Lys Gln Pro Lys Gly Asp Ala Ser Leu Leu Gln Asp Gly Val Leu Ala
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Glu Lys Leu Ser Leu Lys Pro His Gln Gly Pro Val Leu Arg Ser Asn
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240				ctgtcatcga	
300				gggaaaaggt	
360				tcgaccgcaa	
420				gctccacacg	
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Asn Thr Pro Ala Leu Leu Ala Pro Gln Ala Gly Ala Arg Glu Lys Val
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Ala Arg Ser Trp Tyr Cys Asn Arg Gly Leu Val Ser Leu Ser Ala Lys
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Ile Asp Arg Lys Gly Tyr Thr Pro Gly Glu Val Ile Pro Val Phe Ala
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Glu Ile Asp Asn Gly Ser Thr Arg Pro Val Leu Pro Arg Ala Ala Val
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Ala Val Val Ala Ser Leu Ala Gly Glu Pro Val Gly Pro Gly Gln Arg
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Ala Leu Trp Gln Gly Arg Ala Leu Arg Ile Pro Pro Val Gly Pro Ser
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Ile Leu His Cys Arg Val Leu His Val Asp Tyr Ala Leu Lys Val Cys
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                                  170
Val Asp Ile Pro Gly Thr Ser Lys Leu Leu Leu Glu Leu Pro Leu Val
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Ile Gly Thr Ile Pro Leu His Pro Phe Gly Ser Arg Ser Ser Val
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Gly Ser His Ala Ser Phe Leu Leu Asp Trp Arg Leu Gly Ala Leu Pro
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Glu Arg Pro Glu Ala Pro Pro Glu Tyr Ser Glu Val Val Ala Asp Thr
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Glu Glu Ala Ala Leu Gly Gln Ser Pro Phe Pro Leu Pro Gln Asp Pro
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Asp Met Ser Leu Glu Gly Pro Phe Phe Ala Tyr Ile Gln Glu Phe Arg
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1020
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Arg Thr Tyr Ser Arg Lys Lys Gly Gly Arg Lys Ser Arg Ser Lys Ser
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Arg Ser Trp Ser Arg Asp Leu Gln Pro Arg Ser His Ser Tyr Asp Arg
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Arg Arg Arg His Arg Ser Ser Ser Ser Ser Tyr Gly Ser Arg Arg
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Lys Arg Ser Arg Ser Arg Ser Arg Gly Arg Gly Lys Ser Tyr Arg Val
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Gln Arg Ser Arg Ser Lys Ser Arg Thr Arg Arg Ser Arg Ser Arg Pro
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Arg Leu Arg Ser His Ser Arg Ser Ser Glu Arg Ser Ser His Arg Arg
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Thr Arg Ser Arg Ser Arg Asp Arg Glu Arg Arg Lys Gly Arg Asp Lys
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Glu Lys Arg Glu Lys Glu Lys Asp Lys Gly Lys Asp Lys Glu Leu His
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Asn I'le Lys Arg Gly Glu Ser Gly Asn Ile Lys Ala Gly Leu Glu His
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Leu Pro Pro Ala Glu Gln Ala Lys Ala Arg Leu Gln Leu Val Leu Glu
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Ala Ala Ala Lys Ala Asp Glu Ala Leu Lys Ala Lys Glu Arg Asn Glu
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                                               205
Glu Glu Ala Lys Arg Arg Lys Glu Glu Asp Gln Ala Thr Leu Val Glu
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Gln Val Lys Arg Val Lys Glu Ile Glu Ala Ile Glu Ser Asp Ser Phe
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Val Gln Gln Thr Phe Arg Ser Ser Lys Glu Val Lys Lys Ser Val Glu
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Pro Ser Glu Val Lys Gln Ala Thr Ser Thr Ser Gly Pro Ala Ser Ala
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1140

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Gly Gly Thr Pro Ala Phe Leu Pro Ser Ser Leu Ser Pro Gln Ser Ser
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Leu Pro Ala Ser Arg Ala Leu Ala Thr Pro Pro Lys Leu His Thr Cys
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Glu Lys Cys Ser Thr Ser Ile Ala Asn Gln Ala Val Arg Ile Gln Glu
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Tyr Gln Cys Ser Arg Pro Ala Pro Leu His Ser Arg Asp Leu His Ser
Met Ile Val Ala Ala Phe Gln Cys Leu Cys Val Trp Leu Thr Glu His
                                            60
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Pro Asp Met Leu Asp Glu Lys Asp Tyr Leu Lys Glu Val Leu Glu Ile
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Val Glu Leu Gly Ile Ser Gly Ser Lys Ser Lys Asn Asn Glu Gln Glu
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e- <sub>1</sub> .							
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Tyr Phe Gln Val Leu Cys Val Ala Asp Val Val Ile Ser Thr Ala Lys
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His Glu Phe Phe Gly Val Ala Met Leu Glu Ala Val Tyr Cys Gly Cys
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Tyr Pro Leu Cys Pro Lys Asp Leu Val Tyr Pro Glu Ile Phe Pro Ala
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Glu Tyr Leu Tyr Ser Thr Pro Glu Gln Leu Ser Lys Arg Leu Gln Asn
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Phe Cys Lys Arg Pro Asp Ile Ile Arg Lys His Leu Tyr Lys Gly Glu
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                            40
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Gly Ala Gln Ala Pro Gly Arg Ala His Arg Cys Ala His Cys Arg Arg
                                            60
His Phe Pro Gly Trp Val Ala Leu Trp Leu His Thr Arg Arg Cys Gln
                    70
Ala Arg Leu Pro Leu Pro Cys Pro Glu Cys Gly Arg Arg Phe Arg His
                                    90
Ala Pro Phe Leu Ala Leu His Arg Gln Val His Ala Ala Ala Thr Pro
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           100
Asp Leu Gly Phe Ala Cys His Leu Cys Gly Gln Ser Phe Arg Gly Trp
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125

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120
Val Ala Leu Val Leu His Leu Arg Ala His Ser Ala Ala Lys Arg Pro
                                            140
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Ile Ala Cys Pro Lys Cys Glu Arg Arg Phe Trp Arg Arg Lys Gln Leu
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Arg Ala His Leu Arg Arg Cys His Pro Pro Ala Pro Glu Ala Arg Pro
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Phe Ile Cys Gly Asn Cys Gly Arg Ser Phe Ala Gln Trp Asp Gln Leu
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                                                    190
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Val Ala His Lys Arg Val His Val Ala Glu Ala Leu Glu Glu Ala Ala
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Ala Lys Ala Leu Gly Pro Arg Pro Arg Gly Arg Pro Ala Val Thr Ala
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Pro Arg Pro Gly Gly Asp Ala Val Asp Arg Pro Phe Gln Cys Ala Cys
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Cys Gly Lys Arg Phe Arg His Lys Pro Asn Leu Ile Ala His Arg Arg
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Val His Thr Gly Glu Arg Pro His Gln Cys Pro Glu Cys Gly Lys Arg
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Phe Thr Asn Lys Pro Tyr Leu Thr Ser His Arg Arg Ile His Thr Gly
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Glu Lys Pro Tyr Pro Cys Lys Glu Cys Gly Arg Arg Phe Arg His Lys
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Pro Asn Leu Leu Ser His Ser Lys Ile His Xaa Ser Asp Pro Arg Gly
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Ser Cys Glu Phe Leu Leu Ala Gly Ala Gly Gly Ala Gly Ala Gly Ala
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Ala Pro Gly Pro His Leu Pro Pro Arg Gly Ser Val Pro Gly Asp Pro
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Val Arg Ile His Cys Asn Ile Thr Glu Ser Tyr Pro Ala Val Pro Pro
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Ile Trp Ser Val Glu Ser Asp Asp Pro Asn Leu Ala Ala Val Leu Glu
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Arg Leu Val Asp Ile Lys Lys Gly Asn Thr Leu Leu Leu Gln His Leu
                              105
                                                 110
Lys Arg Ile Ile Ser Asp Leu Cys Lys Leu Tyr Asn Leu Pro Gln His
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Pro Asp Val Glu Met Leu Asp Gln Pro Leu Pro Ala Glu Gln Cys Thr
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Gln Glu Asp Val Ser Ser Glu Asp Glu Asp Glu Glu Met Pro Glu Asp
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Thr Glu Asp Leu Asp His Tyr Glu Met Lys Glu Glu Glu Pro Ala Glu
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Gly Lys Lys Ser Glu Asp Asp Gly Ile Gly Lys Glu Asn Leu Ala Ile
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Leu Glu Lys Ile Lys Lys Asn Gln Arg Gln Asp Tyr Leu Asn Gly Ala
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Val Ser Gly Ser Val Gln Ala Thr Asp Arg Leu Met Lys Glu Leu Gln
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Gly Tyr Ile Thr Xaa Ser Gln Ser Phe Lys Gly Gly Asn Tyr Xaa Ser
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Ser Asn Ser Trp Asn Asp Ser Leu Tyr Gly Trp Asp Val Gln Leu Leu
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Asp Val Lys Asn Glu Val Asn Ile Met Asn Gln Leu Ser His Val Asn
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Leu Ile Gln Leu Tyr Asp Ala Phe Glu Ser Lys Ser Ser Phe Thr Leu
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Ile Met Glu Tyr Val Asp Gly Gly Glu Leu Phe Asp Arg Ile Thr Asp
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                          120
                                              125
Glu Lys Tyr His Leu Thr Glu Leu Asp Val Val Leu Phe Thr Arg Gln
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Ile Cys Glu Gly Val His Tyr Leu His Gln His Tyr Ile Leu His Leu
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Asp Leu Lys Pro Glu Asn Ile Leu Cys Val Ser Gln Thr Gly His Gln
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Ile Lys Ile Ile Asp Phe Gly Leu Ala Arg Arg Tyr Lys Pro Arg Glu
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Pro Leu Leu Met Pro Glu Glu Ala Arg Leu Leu Ala Glu Ile Gly
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Ala Val Thr Leu Val Ser Ala Pro Arg Pro Asp Ser Arg His His Ser
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Leu Ala Leu Thr Ser Phe Lys Arg Gln Gln Glu Glu Ser Phe Gln Glu
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Gln Ser Ala Leu Ala Ala Glu Ala Arg Glu Thr Arg Arg Gln Glu Leu
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Leu Glu Lys Ile Thr Glu Gly Gln Ala Ala Lys Lys Gln Lys Leu Glu
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Gln Ala Ser Gly Ala Ser Ser Ser Gln Glu Ala Gly Ser Ser Gln Ala
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Ala Lys Glu Asp Glu Thr Ser Asp Gly Gln Ala Ser Gly Glu Gln Glu
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Trp Pro His Ala Gly Arg Pro Ala His Glu Leu Arg Tyr Ser Ile Tyr
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Val Asn Thr His Pro Gly Leu Ser Phe Leu Lys Glu Ala Ser Glu Phe
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His Ser Arg Tyr Ile Thr Thr Val Ile Gln Arg Ile Phe Tyr Ala Val
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Asn Arg Ser Trp Ser Gly Arg Ile Thr Cys Ala Glu Leu Arg Arg Ser
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Lys Phe Trp Glu Leu Asp Thr Asp His Asp Leu Leu Ile Asp Ala Asp
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Asp Leu Ala Arg His Asn Asp His Ala Leu Ser Thr Lys Met Ile Asp
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